Supreme Court, U.S.
FILED
96 645 OCT 23 1996
OFFICE OF THE CLERK

No.

In the Supreme Court of the United States

OCTOBER TERM, 1996

SUBARU OF AMERICA, INC., AND
FUJI HEAVY INDUSTRIES, INC., PETITIONERS

v.

STEVEN D. COMPTON, RESPONDENT

Petition for a Writ of Certiorari to the United States Court of Appeals for the Tenth Circuit

PETITION FOR A WRIT OF CERTIORARI

RICHARD C. HITE
SCOTT J. GUNDERSON
Kahrs, Nelson, Fanning Hite & Kellogg
200 West Douglas
Wichita, KS 67202
(316) 265-7761

JOSEPH J. KUTER
Senior Counsel
Subaru of America, Inc.
Subaru Plaza
2235 Route 70 West
Cherry Hill, NJ
(609) 488-8572

KENNETH S. GELLER
Counsel of Record
STEPHEN M. SHAPIRO
ALAN E. UNTEREINER
Mayer, Brown & Platt
2000 Pennsylvania Ave., N.W.
Washington, D.C. 20006
(202) 463-2000

12 pp

QUESTIONS PRESENTED

1. Whether the factors set forth in *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), for determining the admissibility of expert testimony under Rule 702 of the Federal Rules of Evidence are inapplicable if the expert proposes to rely not on any "principle" or "methodology" of engineering science but rather upon his "experience" or "training" as an engineer.

2. Whether, if *Daubert* applies to the testimony of respondent's engineering expert, that testimony — which the district court derided as "preposterous" and "the most ill-supported weakest personal opinion I've ever heard" — was erroneously admitted under Rule 702.

RULE 29.6 STATEMENT

Pursuant to Supreme Court Rule 29.6, petitioners state that the parent company of Subaru of America, Inc. (Subaru) is Fuji Heavy Industries, Inc. (Fuji), and that Fuji has no parent company. Fuji's only non-wholly owned subsidiary is Subaru-Isuzu Automobile, Inc., which is 51% owned by Fuji and 49% owned by Isuzu Motors Limited. Subaru's only non-wholly owned subsidiary is Pleiades Insurance Co., Ltd. (Pleiades). Subaru holds 119,998 shares of Pleiades, and Mary C. Harrington and Joseph P. Scharff each hold 1 share.

TABLE OF CONTENTS

Page

QUESTIONS PRESENTED i

RULE 29.6 STATEMENT ii

TABLE OF AUTHORITIES iv

OPINIONS BELOW 1

JURISDICTION 1

RULE INVOLVED 1

STATEMENT 1

REASONS FOR GRANTING THE PETITION 8

A. The *Daubert* Decision 9

B. The Tenth Circuit's Decision Is Inconsistent With *Daubert* And In Conflict With The Decisions Of Other Circuits 11

C. The Tenth Circuit's Decision Is Manifestly Incorrect 21

D. The Issues Presented Are Important And Recurring 26

CONCLUSION 30

TABLE OF AUTHORITIES

Cases: **Page**

Arrendondo v. *Uniroyal Goodrich Tire Co.*, 1995 U.S. Dist. LEXIS 19943 (D. Ariz. Aug. 15, 1995) 15

Berry v. *City of Detroit*, 25 F.3d 1342 (6th Cir. 1994), cert. denied, 115 S. Ct. 902 (1995) 12, 25

Braun v. *Lorillard Inc.*, 84 F.3d 230 (7th Cir. 1996), petition for cert. filed, 65 U.S.L.W. 3185 (No. 96-377) (Sept. 11, 1996). 27, 30

Brown v. *Miska*, 1995 U.S. Dist. LEXIS 17197 (S.D. Tex. July 19, 1995) 15

Buckman v. *Bombardier Corp.*, 893 F. Supp. 547 (E.D.N.C. 1995) 19, 20

Byrnes v. *Honda Motor Co.*, 887 F. Supp. 279 (S.D. Fla. 1994) 19

Carmichael v. *Samyang Tires, Inc.*, 923 F. Supp. 1514 (S.D. Ala. 1996) 19

Comer v. *Edelson*, 1995 U.S. Dist. LEXIS 11077 (S.D.N.Y. Aug. 4, 1995) 16

Cummins v. *Lyle Indus.*, 93 F.3d 362 (7th Cir. 1996) 13, 17, 18, 25

Daubert v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) . . . . . *passim*

Daubert v. *Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311 (9th Cir. 1995) 21, 28

Deimer v. *Cincinnati Sub-Zero Products, Inc.*, 58 F.3d 341 (7th Cir. 1995) 15, 18

Diviero v. *Uniroyal Goodrich Tire Co.*, 919 F. Supp. 1353 (D. Ariz. 1996) 19

E.I. Du Pont De Nemours & Co. v. *Robinson*, 923 S.W.2d 549 (Tex. 1995) 28

TABLE OF AUTHORITIES — Continued

Page

Edwards v. *ATRO S.p.A.*, 891 F. Supp. 1074 (E.D.N.C. 1995) 19, 20

Freeman v. *Case Corp.*, 924 F. Supp. 1456 (W.D. Va. 1996) 19

Frye v. *United States*, 293 F. 1013 (D.C. Cir. 1923) 9

Hopkins v. *NCR Corp.*, 1994 U.S. Dist. LEXIS 17273 (M.D. La. 1994), aff'd, 53 F.3d 1281 (5th Cir. 1995) 19

Iacobelli Constr. v. *County of Monroe*, 32 F.3d 19 (2d Cir. 1994) 16

Lappe v. *American Honda Motor Co.*, 857 F. Supp. 222 (N.D.N.Y. 1994) 16

Liriano v. *Hobart Corp.*, 1996 WL 304337 (S.D.N.Y. July 23, 1996) 28

McCullock v. *H.B. Fuller Co.*, 61 F.3d 1038 (2d Cir. 1995) 16

Navarro v. *Fuji Heavy Indus., Ltd.*, 925 F. Supp. 1323 (N.D. Ill. 1996) 15, 26

O'Conner v. *Commonwealth Edison Co.*, 13 F.3d 1090 (7th Cir.), cert. denied, 114 S. Ct. 2711 (1994) 14

Officer v. *Teledyne Republic/Sprague*, 870 F. Supp. 408 (D. Mass. 1994) 20

Peitzmeier v. *Hennessy Indus., Inc.*, 1996 U.S. App. LEXIS 26115 (8th Cir. Oct. 4, 1996) 17, 18, 20

Pestel v. *Vermeer Mfg. Co.*, 64 F.3d 382 (8th Cir. 1995) 16, 17, 18

Pries v. *Honda Motor Co., Ltd.*, 31 F.3d 543 (7th Cir. 1993) 21

TABLE OF AUTHORITIES — Continued

Page

Rosen v. *Ciba-Geigy Corp.*, 78 F.3d 316 (7th Cir. 1996), cert. denied, 1996 U.S. LEXIS 4783 (Oct. 7, 1996) 14, 15, 29

Stanczyk v. *Black & Decker, Inc.*, 836 F. Supp. 565 (N.D. Ill. 1992) 19

State v. *Foret*, 628 So.2d 1116 (La. 1993) 28

Tamarin v. *Adam Caterers, Inc.*, 13 F.3d 51 (2d Cir. 1993) 16

Thomas J. Kline, Inc. v. *Lorillard, Inc.*, 878 F.2d 791 (1989), cert. denied, 493 U.S. 1073 (1990) 20

United States v. *Lee*, 25 F.3d 997 (11th Cir. 1994) (per curiam) 18

United States v. *Markum*, 4 F.3d 891 (10th Cir. 1993) 25

United States v. *Muldrow*, 19 F.3d 1332 (10th Cir.), cert. denied, 115 S.Ct. 175 (1994) 25

United States v. *Rice*, 52 F.3d 843 (10th Cir. 1995) 25

Waitek v. *Dalkon Shield Claimants Trust*, 1996 U.S. Dist. LEXIS 11141 (N.D. Iowa July 31, 1996) 28, 29

Wheeler v. *John Deere Co.*, 935 F.2d 1090 (10th Cir. 1991) 7

Wintz v. *Northrop Corp.*, 1995 U.S. Dist. LEXIS 18952 (N.D. Ill. Dec. 22, 1995) 15

Statutes, Rules, And Regulations:

28 U.S.C. § 1254(1) 1

Fed. R. Civ. P. 50 . . . . . 6, 7

TABLE OF AUTHORITIES — Continued

Page

Fed. R. Evid. 104 . . . . . 5, 10

Fed. R. Evid. 702 . . . . . *passim*

Federal Motor Vehicle Safety Standard 216, 49 C.F.R. § 571.216 2

La. Civ. Evid. art. 702 28

Miscellaneous:

Administrative Office of the U.S. Courts, Statistics Division, ANNUAL REPORT OF THE DIRECTOR, table S-7 (unpub. 1996) 29

Lisa Agrimonti, *The Limitations On Daubert and Its Misapplication To Quasi-Scientific Experts*, 35 WASHBURN L.J. 134 (1995) 20, 29

American College of Trial Lawyers, *Standards and Procedures for Determining the Admissibility of Expert Evidence After Daubert*, 157 F.R.D. 571 (1994) 12

Nelson Apjohn & Suzanne Quill, *Post-'Daubert' Admissibility of Expert Testimony on Mechanical Design and Engineering Issues*, 23 PROD. SAFETY & LIAB. RPTR. 553 (May 19, 1995) 19

Developments in the Law: Confronting the New Challenges of Scientific Evidence, 108 HARV. L. REV. 1481 (1995) 27, 28

David Faigman, *Making the Law Safe For Science: A Proposed Rule for the Admission of Expert Testimony*, 35 WASHBURN L.J. 401 (1996) 24

G. Michael Fenner, *The Daubert Handbook: The Case, Its Essential Dilemma, And Its Progeny*, 29 CREIGHTON L. REV. 939 (1996) 29

TABLE OF AUTHORITIES — Continued

Page

Michael Hoenig, *New Cases on Experts After "Daubert"*, N.Y. LAW J. 6 (May 13, 1996) 23, 28

PETER HUBER, GALILEO'S REVENGE: JUNK SCIENCE IN THE COURTROOM (1991) 27

Michael Polentz, *Post-Daubert Confusion With Expert Testimony*, 36 SANTA CLARA L. REV. 1187 (1996) 29

WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY (1986) 13

PETITION FOR A WRIT OF CERTIORARI

Petitioners Subaru of America, Inc., and Fuji Heavy Industries, Inc., petition for a writ of certiorari to review the judgment of the United States Court of Appeals for the Tenth Circuit in this case.

OPINIONS BELOW

The opinion of the court of appeals (App., *infra*, 1a-12a) is reported at 82 F.3d 1513. The opinion of the district court (App., *infra*, 13a-20a) is unreported.

JURISDICTION

The judgment of the court of appeals was entered on April 30, 1996. A petition for rehearing was denied on July 25, 1996 (App., *infra*, 31a-32a). The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

RULE INVOLVED

Federal Rule of Evidence 702 provides:

> **Testimony by Experts**
>
> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

STATEMENT

This product liability action arose out of an automobile accident that took place in 1988 on a highway near Scott City, Kansas. The plaintiff, Steven D. Compton, sustained severe injuries when the 1982 Subaru GL Station Wagon in which he was traveling along with four teenaged friends skidded off the road, entered a ditch, and rolled over twice. Compton was riding in the back seat without wearing a seatbelt; he and the other occupants of the automobile had consumed numerous six-packs of beer earlier that evening. The accident occurred when the station wagon was weaving back and forth at approximately 60 miles per hour across the center line of the road while chasing another car driven by Compton's former girlfriend. One of the teenagers reached over and yanked the steering wheel, causing the Subaru to veer out of

control. None of the other occupants was seriously injured in the accident.

Compton brought suit against the automobile's manufacturer, Fuji Heavy Industries, Ltd. (Fuji) and its distributor, Subaru of America, Inc. (Subaru), contending that the Subaru was defectively designed because it lacked sufficient roof support structures and permitted excessive "roof crush." To support that theory, plaintiff proffered the testimony of Larry Bihlmeyer, an aerospace and mechanical engineer who had once worked in the auto industry but had no direct experience in designing automobile roofs or roof supports. Bihlmeyer testified that the Subaru's roof should have been designed to deform no more than 2½ inches in rollover accidents occurring at 50 to 70 miles per hour (and involving impact forces of 48,000 to 71,000 pounds). It is undisputed that Federal Motor Vehicle Safety Standard (FMVSS) 216, 49 C.F.R. § 571.216, which sets forth the roof crush resistance standard applicable to the Subaru wagon involved in the accident, requires that the front portion of the Subaru's roof deform no more than 5 inches when subjected to a force of 3,600 pounds. It is also undisputed that the Subaru's design exceeded FMVSS 216: it deformed only 2 inches when subjected to a force of 4,625 pounds.

Subaru and Fuji maintained that Bihlmeyer's engineering testimony was inadmissible under the standards for expert testimony set forth in *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), because it was not grounded in any particular methodology or reasoning, did not depend on accepted industry standards or on any scientific knowledge or principle, had not been subjected to peer review or testing or been generally accepted by the relevant expert community, and ultimately consisted of nothing more than Bihlmeyer's personal opinion that the roof was not sufficiently resistant to crush. The district judge permitted Bihlmeyer to testify, explaining that he was constrained to do so under the Tenth Circuit's "position of extreme liberality with respect to admissibility of expert testimony in products liability cases." App., *infra*, 25a. Nevertheless, the judge harshly criticized Bihlmeyer as a "marginal expert" who "has little if any knowledge about what he is purporting to testify about." *Id.* at 30a-31a. After hearing Bihlmeyer's testimony, the judge called his

testimony "preposterous" and "the most ill-supported weakest personal opinion I've ever heard," and referred to the design standard proposed by Bihlmeyer as "more applicable to a Sherman tank than to any vehicle which the ordinary consumer would drive." Pet. C.A. App. 226, 235; App., *infra*, 20a n.5.

Based on Bihlmeyer's testimony, the jury returned a verdict against petitioners of $6,574,081. The Tenth Circuit affirmed, holding that *Daubert* was inapplicable *precisely because* Bihlmeyer's testimony was based not on any "principle or methodology" or "particular technique" of engineering science but rather "solely upon [his] experience and training" as an engineer. App., *infra*, 8a-9a.

A. Proceedings In The Trial Court.

The *only* theory of liability presented to the jury was plaintiff's claim that the Subaru wagon was defectively designed because its roof and roof structures were insufficiently resistant to deformation. The *only* evidence plaintiff presented to support that theory was the testimony of Larry Bihlmeyer.

1. *Bihlmeyer's Qualifications And Testimony Concerning The Alleged Defect.* a. Larry Bihlmeyer, who received a master's degree in mechanical engineering in 1975, worked from 1972 to 1986 in the light truck engineering department of Ford Motor Company. Pet. C.A. App. 281-83, 363-64, 392. During that time, he was never assigned to the automobile or station wagon engineering department or to the body structures group (which had responsibility for the design of roofs and roof supports). *Id.* at 368, 370, 392-93. Bihlmeyer's only involvement with any decision concerning a vehicle roof was as part of a task force that was developing a pickup truck's roof. *Id.* at 302, 304, 398-400. Bihlmeyer's limited role was to try to "commonize" parts to keep costs down. *Id.* at 398-400.

In 1987, Bihlmeyer became a self-employed "consulting engineer" focusing on injury-producing accidents. Pet. C.A. App. 323. In his work as a consultant, Bihlmeyer has testified in cases involving a wide array of products. *Id.* at 542-44. Bihlmeyer has also performed design analyses on the roof and roof support structures of numerous vehicles. *Id.* at 325, 347-48, 410-11, 414-15. Bihlmeyer acknowledged that the 1982 Subaru station wagon

involved in this accident was designed a decade or so before he began his career as a consulting engineer. *Id.* at 382, 415.

Bihlmeyer admitted that during his entire engineering career, including his career as a consultant and expert witness, he had never been responsible for designing the roof structure of a vehicle from the standpoint of selecting materials and determining strength and rigidity requirements. Pet. C.A. App. 402-03, 405. Bihlmeyer also conceded that he is not an expert in welding, metallurgy or materials. *Id.* at 406.

b. The district judge summarized Bihlmeyer's methodology in arriving at his opinion that the Subaru's roof and roof support system was defective as follows:

> The methodology * * * included inspection of the accident and exemplar cars, taking of measurements and photos, preparation of sketches, performance of a "design engineering review and analysis," review of depositions, and research and review of technical papers and vehicle specifications.

App., *infra*, 18a. Bihlmeyer repeatedly stated that his testimony was based on general engineering "concepts" such as strength of materials, structural mechanics, engineering analysis and dynamic and static loads. Pet. C.A. App. 286, 309, 311-14, 323-26.

Bihlmeyer testified that there is no industry or government standard that establishes *headroom* (as opposed to roof crush) requirements for vehicles designed and sold in this country. Pet. C.A. App. 439. Nevertheless, Bihlmeyer's design standard proceeded from the assumption that an adequate design would have preserved a certain amount of headroom following a rollover accident.[1] On cross-examination, Bihlmeyer explained the standard by which he judged the design of a vehicle roof. He stated that there should be no more than 2½ inches of crush and 33 inches of headroom remaining after a rollover accident, even if all the force of a crushing impact was focused on a small area of

---

[1] To formulate his "headroom" standard, Bihlmeyer purported to rely on six sources, several of which said nothing about headroom and none of which described any standard that had ever been used in the design of any actual vehicle sold to consumers. App., *infra*, 4a; Pet. C.A. App. 432, 437-39.

the roof (as it was in this case). *Id.* at 626-27, 631-32. He believed that crush should be limited by design to ensure 33 inches of remaining headroom on a mandatory basis for accidents at 50 mph and "would shoot for 70 miles per hour." *Id.* at 629, 632. This would require the roof of a vehicle to withstand "average" forces of between 48,000 and 71,000 pounds. *Id.* at 632. Bihlmeyer acknowledged that "peak" or maximum accident forces may be greater than average forces, but he was unable to calculate the peak forces that might be involved in an accident that would produce average forces between 48,000 and 71,000 pounds. *Id.* at 631-32.

Bihlmeyer did not reveal the reasoning and methodology employed in arriving at his conclusions except that he intended to make the roof "stronger." Pet. C.A. App. 514-16. The record is equally silent concerning what materials Bihlmeyer would have employed to strengthen the roof of the Subaru, the weight of the materials, and their effect, if any, on vehicle handling and the operator's field of vision. Bihlmeyer offered no testimony that the design standard he espoused had ever been adopted by any manufacturer or any other person or organization.

Bihlmeyer acknowledged that the process of design is a complex task and that testing is a very important part of any such process because what looks good on paper might require multiple revisions based on actual experience. Pet. C.A. App. 262, 265-66, 362-63, 372. He conceded, however, that he had done no testing on either the accident vehicle or the exemplar vehicle. *Id.* at 397. Plaintiff offered no evidence that Bihlmeyer or anyone else had ever tested the alternative design that he claimed would have prevented his injury.

2. *The Preliminary Inquiry Into Admissibility.* In seeking to exclude Bihlmeyer's testimony under Rules 104(a) and 702 of the Federal Rules of Evidence, Subaru and Fuji argued that Bihlmeyer's knowledge and experience in the area of designing automobile roofs and roof supports were non-existent, and his opinion about the adequacy of the Subaru's roof design was nothing more than "a personal judgment with none of the safeguards required by * * * *Daubert* [v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993)]." App., *infra*, 22a. Making a virtue of necessity, plaintiff responded that *Daubert*

"doesn't enter into this" because Bihlmeyer's testimony was not founded on any scientific tests, studies, or technology. *Id.* at 22a-24a. The district judge agreed with plaintiff, explaining that he was obliged to adhere to the Tenth Circuit's "position of extreme liberality with respect to admissibility of expert testimony in products liability cases," as set forth in pre-*Daubert* decisions. *Id.* at 25a.

Nonetheless, the district judge found that Bihlmeyer's "expertise" was insubstantial. The judge stated that Bihlmeyer "has little if any knowledge about what he is purporting to testify about" and "doesn't know beans about welding in my opinion and he knows very little about roofs." App., *infra*, 25a-26a. The judge also referred to Bihlmeyer's "marginal qualifications and knowledge" and described his expertise as "little or none in this area." *Id.* at 27a.

3. *Defendants' Motions For Judgment As A Matter of Law.* a. At the close of all the evidence, Subaru and Fuji moved for judgment as a matter of law under Rule 50(a) of the Federal Rules of Civil Procedure. Pet. C.A. App. 216. They argued that no reasonable jury could find liability based on Bihlmeyer's testimony, which was the only evidence of design defect presented by plaintiff. In response to the argument that Bihlmeyer's testimony was based on an "absolutely * * * ludicrous standard" because it would "require roof resistance to a force of between 20 and 30 times vehicle weight, producing only half the amount of crush that the federal standard permits at 1½ times vehicle weight" (Pet. C.A. App. 226), the district judge stated:

> I know. *It's preposterous, I agree.* I mean, I can't believe that it should be viewed really any other way, but that's — maybe — that calls, I'm afraid, on me to weigh the evidence and I'm not supposed to do that. I'm not the finder of fact.

Ibid. (emphasis added). The district judge described Bihlmeyer's testimony as "the *most ill-supported weakest personal opinion I've ever heard.*" *Id.* at 235 (emphasis added). The judge also noted that if he were to deny the motion and "allow the jury to decide this and they find in favor of [plaintiff], unfortunately I'm going to have to look very very carefully at this because I'm very

troubled by it." *Id.* at 230. In the end, however, the judge denied the motion.

Subsequently, the jury found Subaru and Fuji 56% at fault and returned a verdict of $6,574,081 in plaintiff's favor. App., *infra*, 2a.

b. Following the verdict, Subaru and Fuji renewed their Rule 50 motion for judgment. The district judge denied the motion in an unpublished opinion (App., *infra*, 13a-20a) in which he again rejected petitioners' argument based on *Daubert*. Nonetheless, the judge reiterated his extreme skepticism about the value of Bihlmeyer's testimony. "Rereading Bihlmeyer's testimony," the judge stated, "has done nothing to change the court's extremely low opinion of Bihlmeyer's credibility and of the validity of his opinions." App., *infra*, 20a (emphasis omitted). The court pointedly added:

> Bihlmeyer's design criterion, which would limit roof crush to no more than 2½ inches under average forces of 48,000 to 71,000 pounds, *seems more applicable to a Sherman tank than to any vehicle which the ordinary consumer would drive.*

Id. at 20a n.5 (emphasis added).

B. Proceedings In The Court of Appeals.

The court of appeals affirmed. App., *infra*, 1a-12a. The court began by noting that, "prior to *Daubert*," trial judges in the Tenth Circuit were "'accorded broad discretion in determining the competency of expert witnesses.'" *Id.* at 6a (quoting *Wheeler* v. *John Deere Co.*, 935 F.2d 1090, 1100 (10th Cir. 1991)). That discretion, however, could not be "employ[ed] * * * to restrict viable and relevant theories offered by a party." *Ibid.* (internal quotations omitted). Because under Rule 702 "the touchstone of admissibility * * * is helpfulness to the trier of fact," "as long as a logical basis exists for an expert's opinion * * * the weaknesses in the underpinnings of the opinion[ ] go to the weight and not the admissibility of the testimony." *Ibid.* (internal quotations omitted).

The court of appeals stated that "we do not believe *Daubert* completely changes our traditional analysis under Rule 702." App., *infra*, 8a. According to the Tenth Circuit, the *Daubert* factors "are applicable *only* when a proffered expert relies on *some*

principle or methodology." *Ibid.* (emphasis added). Where "expert testimony is based solely upon *experience or training*," however, "application of the *Daubert* factors is unwarranted." *Ibid.* (emphasis added). See also *ibid.* (*Daubert* applies only "in cases involving unique, untested, or controversial methodologies or techniques"); *ibid.* ("*Daubert* sets out additional factors the trial court should consider under Rule 702 if an expert witness offers testimony *based upon a particular methodology or technique*") (emphasis added).

Applying that distinction to the case before it, the Tenth Circuit held that *Daubert* was wholly inapplicable to Bihlmeyer's "expert" testimony. That testimony, the court explained,

> was not based on any particular methodology or technique. Rather, Mr. Bihlmeyer reached his expert conclusions by drawing upon general engineering principles and his twenty-two years of experience as an automotive engineer. Absent some particular methodology or technique, *Daubert* simply has little bearing on Mr. Bihlmeyer's testimony.

App., *infra*, 9a.[2]

REASONS FOR GRANTING THE PETITION

This case presents the Court with an opportunity to provide much-needed guidance to the lower courts regarding the applicability of *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), outside the context of expert testimony concerning a novel scientific technique (the kind of evidence at issue in *Daubert*). Specifically, it is essential that the Court clarify how the *Daubert* framework applies to a common and important type of "applied scientific" evidence in federal litigation — expert engineering testimony proffered to demonstrate that a consumer product is defectively designed. The Tenth Circuit held that *Daubert* is completely inapplicable in that situation, and that a trial judge accordingly has *no* duty under Rule 702 of the Federal Rules

---

[2] Because the Tenth Circuit found that Bihlmeyer's testimony satisfied the requirements of Rule 702, it also rejected the contention that the district judge erred in failing to grant the motion of Fuji and Subaru for judgment as a matter of law. App., *infra*, 10a-12a.

of Evidence to evaluate the reliability of such expert testimony, even if the expert fails to rely on *any* principle or methodology of engineering science. As a result, the jury in this case was permitted to award nearly $7 million in damages based on "expert" engineering testimony that the trial court found to be "preposterous."

This ruling, which is symptomatic of the pervasive confusion in the lower courts over *Daubert*'s meaning, is squarely at odds with the decisions of other circuits, misapprehends this Court's *Daubert* decision, and creates a huge loophole by means of which the "gatekeeper" obligations imposed on trial judges by Rule 702 can be easily circumvented. Further review is plainly warranted.

A. The *Daubert* Decision.

Daubert v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), involved a lawsuit alleging that several children were born with birth defects because their mothers had ingested Bendectin, a prescription antinausea drug, during their pregnancies. At issue was the admissibility of certain expert scientific testimony concerning the causal connection between Bendectin and the birth defects.

The Court's decision had two aspects. The first was its rejection of the so-called "*Frye* test" for determining the admissibility of novel scientific evidence. See *Frye* v. *United States*, 293 F. 1013 (D.C. Cir. 1923). Under *Frye*, evidence is admissible only if derived from a method that has gained "'general acceptance in the particular field in which it belongs.'" *Daubert*, 509 U.S. at 586 (emphasis omitted) (quoting *Frye*, 293 F. at 1014). In *Daubert*, the Ninth Circuit had applied this test in upholding the exclusion of the experts' evidence. This Court reversed, explaining that *Frye* was superseded by the adoption of the Federal Rules of Evidence, and in particular by Rule 702, which provides:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

Fed. R. Evid. 702.

The second aspect of the Court's opinion, and the one pertinent here, is the Court's explanation of the district court's obligation, under Rule 702, to "ensure that *any and all scientific testimony or evidence* admitted is not only *relevant*, but *reliable*." 509 U.S. at 589 (emphasis added). Under the terms of Rule 702, the Court explained, "[t]he subject of an expert's testimony must be 'scientific . . . knowledge,'" a phrase that both "implies a grounding in the methods and procedures of science" and "connotes more than subjective belief or unsupported speculation." *Id.* at 589-90. The Court elaborated:

> [I]n order to qualify as "scientific knowledge," an inference or assertion must be derived by the scientific method. Proposed testimony must be supported by appropriate validation — *i.e.*, "good grounds," based on what is known.

Id. at 590. "In short, the requirement that an expert's testimony pertain to 'scientific knowledge' establishes a standard of evidentiary reliability." *Ibid.* See also *id.* at 590 n.9 ("In a case involving scientific evidence, *evidentiary reliability* will be based upon *scientific validity*.") (emphasis in original). Under Rule 702, then, an expert's opinion must "have a reliable basis in the knowledge and experience of his discipline." *Id.* at 592.

The Court pointed out that in addition to "scientific . . . knowledge," Rule 702 refers to "technical, or other specialized knowledge." 509 U.S. at 590 & n.8. "Our discussion," the Court stated, "is limited to the scientific context because that is the nature of the expertise offered here." *Ibid.* But the Court made clear that "[a]lthough the *Frye* decision itself focused exclusively on 'novel' scientific techniques, we do not read the requirements of Rule 702 to apply specially or exclusively to unconventional evidence." *Id.* at 592 n.11.

To assist the lower court on remand, the Court provided guidance as to how a district judge must determine, as a preliminary matter under Rule 104(a) of the Federal Rules of Evidence, whether an expert "is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue." 509 U.S. at 592. The Court identified four factors that bear on "whether the reasoning

or methodology underlying the testimony is scientifically valid and * * * properly can be applied to the facts in issue." *Id.* at 592-93.

First, the Court noted that "[o]rdinarily, a key question to be answered in determining whether a theory or technique is scientific knowledge that will assist the trier of fact will be whether it can be (and has been) tested." 509 U.S. at 593. A second consideration, the Court continued, "is whether the theory or technique has been subjected to peer review and publication." *Ibid.* "[S]ubmission to the scrutiny of the scientific community is a component of 'good science,' in part because it increases the likelihood that substantive flaws in methodology will be detected." *Ibid.* Third, a district court "ordinarily should consider the known or potential rate of error * * * and the existence and maintenance of standards controlling the technique's operation." *Id.* at 594. Fourth and finally, "'general acceptance' can yet have a bearing on the inquiry." *Ibid.* "Widespread acceptance can be an important factor in ruling particular evidence admissible, and a known technique which has been able to attract only minimal support within the community * * * may properly be viewed with skepticism." *Ibid.* (internal quotations omitted).

Thus, in *Daubert* this Court held that under Rule 702 a district judge must serve as a "gatekeeper" to ensure that all expert testimony and evidence presented in a federal courtroom is both reliable and relevant, and must (in the case of expert testimony that is based on *scientific* knowledge) undertake "a preliminary assessment of whether the reasoning or methodology underlying the testimony is *scientifically valid*." 509 U.S. at 589, 592-93 (emphasis added). And the Court set forth various factors that should guide the trial judge's determination of whether an expert's opinion has "a reliable basis in the knowledge and experience of his discipline." *Id.* at 592.

B. The Tenth Circuit's Decision Is Inconsistent With *Daubert* And In Conflict With The Decisions Of Other Circuits.

The Tenth Circuit avoided any evaluation of the *Daubert* factors (or other indicia of evidentiary reliability) on the ground that *Daubert* is "applicable *only* when a proffered expert relies on *some principle or methodology*." App., *infra*, 8a (emphasis

added). Where "expert testimony is based solely upon *experience or training*," the court of appeals concluded, "application of the *Daubert* factors is unwarranted." *Ibid.* (emphasis added).

Under the Tenth Circuit's interpretation, *Daubert* simply had no relevance to Bihlmeyer's expert testimony. His testimony

> was not based on any particular methodology or technique. Rather, Mr. Bihlmeyer reached his expert conclusions by drawing upon general engineering principles and his twenty-two years of experience as an automotive engineer.

App., *infra*, 9a. On the strength of that distinction, the court of appeals treated the admissibility question as governed entirely by the Tenth Circuit's pre-*Daubert* case law, which required as a basis for admissibility only that an expert's opinion have "a logical basis." *Id.* at 6a (internal quotations omitted).

1. The Tenth Circuit's analysis is inconsistent with *Daubert* in several critical respects. To begin with, even though *Daubert* was a case involving novel or unconventional forms of *scientific* evidence, the Court's holding was not limited to such evidence: "the Rules of Evidence — especially Rule 702 — do assign to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." 509 U.S. at 597; accord *id.* at 589 (Rule 702 "clearly contemplates some degree of regulation of the subjects and theories about which an expert may testify"). As the Sixth Circuit has stated, *Daubert*'s "language relative to the 'gatekeeper' function of federal judges is applicable to all expert testimony offered under Rule 702." *Berry* v. *City of Detroit*, 25 F.3d 1342, 1350 (6th Cir. 1994), cert. denied, 115 S. Ct. 902 (1995). See also American College of Trial Lawyers, *Standards and Procedures for Determining the Admissibility of Expert Evidence After Daubert*, 157 F.R.D. 571, 577 (1994) (*Daubert* requires "a single conceptual framework for evaluating the admissibility of all types of expert evidence").

Moreover, this Court's analysis in deriving the twin requirements that expert evidence be reliable and relevant was rooted in the text of Rule 702. The language of the Rule, the Court explained, demonstrates that an expert opinion must be founded in "knowledge," a term that "connotes more than subjective belief or unsupported speculation" and signifies "any

body of known facts or * * * any body of ideas inferred from such facts or accepted as truths *on good grounds*." 509 U.S. at 590 (emphasis added) (internal quotations omitted). While the Court also went on to discuss the meaning of the adjective "scientific," its discussion of the term "knowledge" plainly applies to any kind of expert testimony offered under Rule 702.

Finally, the Tenth Circuit's conclusion that *Daubert* may be bypassed altogether as long as an engineering expert forgoes reliance on *any* method or technique of engineering science is impossible to reconcile with this Court's statement that a district court, under Rule 702, must "ensure that *any and all scientific testimony or evidence* admitted is not only *relevant*, but *reliable*." 509 U.S. at 589 (emphasis added). That statement demonstrates that if the *subject matter* of expert testimony is "scientific," then *Daubert* is fully applicable. See *Cummins* v. *Lyle Indus.*, 93 F.3d 362, 367-68 (7th Cir. 1996) (in case involving engineer's testimony concerning design defect, stating that "[i]n the context of theoretical and applied science," *Daubert* "places on the court the obligation to ensure that the proffered testimony pertains to scientific knowledge").

It cannot seriously be disputed that an engineer's opinion concerning whether the design of an automobile's roof and roof support structures is defective is "scientific" in nature. Engineering is "*the science* by which the properties of matter and the sources of energy in nature are made useful to man in structures, machines, and products." WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 752 (1986) (emphasis added). As Bihlmeyer himself conceded, engineering involves knowledge of physics and of physical forces; the physical properties and strength of materials; structural analysis; metallurgy and welding; and structural and vehicle dynamics. Pet. C.A. App. 257-59, 263-65. The design of an automobile roof and roof structures requires an engineer to draw on this scientific knowledge in analyzing a number of complex variables, including (1) the wide variety of rollovers that can occur; (2) occupant kinematics, or the motion of occupants inside the vehicle; and (3) the desirability (acknowledged by Bihlmeyer) of some degree of "roof crush" to absorb the impact of the physical forces and loads that are exerted during the rollover. *Id.* at 550-55, 558. And, of course, engineers (like

other experts whose work is rooted in scientific knowledge) consider *testing* to be indispensable to the proper evaluation of design defects and of alternative designs — as Bihlmeyer himself conceded. See *id.* at 262, 362. Because engineering testimony of the kind offered by Bihlmeyer is plainly rooted in scientific knowledge, and because under *Daubert* "*any and all* scientific testimony or evidence" must be evaluated for evidentiary reliability (509 U.S. at 589 (emphasis added)), the Tenth Circuit was mistaken in suggesting that it had no need to decide whether Bihlmeyer's testimony was based on scientific knowledge.

2. The Tenth Circuit's decision is also in conflict with the decisions of other circuits in several important respects.

a. The Tenth Circuit's holding that *Daubert* applies "*only* when a proffered expert relies on *some principle or methodology*," and not when "expert testimony is based solely upon *experience or training*" (App., *infra*, 8a (emphasis added)), is at odds with the settled rule in the Seventh Circuit. The Seventh Circuit has flatly rejected the notion that expert scientific testimony that would otherwise be subject to scrutiny for reliability and relevance under *Daubert* may avoid such scrutiny if the expert purports to rely on "experience" or "observation" rather than on the pertinent scientific method. Thus, in *O'Conner* v. *Commonwealth Edison Co.*, 13 F.3d 1090 (7th Cir.), cert. denied, 114 S. Ct. 2711 (1994), the court of appeals upheld the exclusion of a treating physician's testimony that a plaintiff's cataracts had been caused by radiation exposure. The medical expert purported to testify based solely on his observations of the plaintiff's cataracts. But because none of the articles cited and relied on by the expert "indicates that radiation-induced cataracts can be identified by mere observation," the Seventh Circuit explained, the expert's testimony "has no basis in scientific fact." *Id.* at 1106.

Similarly, in *Rosen* v. *Ciba-Geigy Corp.*, 78 F.3d 316 (7th Cir. 1996), cert. denied, 1996 U.S. LEXIS 4783 (Oct. 7, 1996),[3]

---

[3] The petition for certiorari in *Rosen*, as to which respondents waived response, did not allege or identify any conflict in the circuits. See No. 95-1986 Pet., *Rosen* v. *Ciba-Geigy Corp.* There was no need for further review in *Rosen* because it faithfully applied the legal principles set forth

the court of appeals upheld the exclusion under *Daubert* of testimony of a "distinguished cardiologist and department head at the University of Chicago" concerning the causal link between a plaintiff's heart attack and the wearing of a nicotine patch. *Id.* at 318. Because the expert offered "neither a theoretical reason" nor "any experimental, statistical, or other scientific data from which such a causal relation might be inferred," but only "an insightful, even an inspired, hunch," the testimony was "not real science" and thus properly excluded. *Id.* at 318-19.[4] As *O'Conner* and *Rosen* make clear, the Rule 702 inquiry into reliability and relevance cannot be avoided merely because an expert purports to rely on

---

in *Daubert*.

[4] See also *Deimer* v. *Cincinnati Sub-Zero Products, Inc.*, 58 F.3d 341, 345 (7th Cir. 1995) (in upholding exclusion of testimony concerning design defect by expert engineer who "proffered unverified statements that were unsupported by any scientific method," explaining that "personal observation" is "not sufficient to establish a methodology based in scientific fact"); *Navarro* v. *Fuji Heavy Indus., Ltd.*, 925 F. Supp. 1323, 1328-29 (N.D. Ill. 1996) (in holding inadmissible engineer's testimony concerning defective design of automobile's suspension system that was based on expert's inspection of vehicle, review of depositions, knowledge of literature, and expert's "training" and "experience," explaining that testimony lacked a reliable foundation because expert failed to "set forth the methodology employed in reaching his conclusions"); *Wintz* v. *Northrop Corp.*, 1995 U.S. Dist. LEXIS 18952, at *7 (N.D. Ill. Dec. 22, 1995) (in excluding toxicologist's opinion that plaintiff's disease was caused by exposure to bromide as "lacking in scientific reliability," explaining that "personal observation is not sufficient to establish a methodology based in scientific fact"); *Arrendondo* v. *Uniroyal Goodrich Tire Co.*, 1995 U.S. Dist. LEXIS 19943, at *12-*13 (D. Ariz. Aug. 15, 1995) (in excluding testimony on tire failure based on expert's "experience in the field and years of examining tires," explaining that "[s]uch testimony *requires a link to a scientific method*, which incorporates manufacturing data, test results, or the like") (emphasis added); *Brown* v. *Miska*, 1995 U.S. Dist. LEXIS 17197, at *11 (S.D. Tex. July 19, 1995) (in holding inadmissible engineer's testimony concerning design of automobile seatback, explaining that testimony "does not reflect the application of any particular methodology").

experience or observation rather than on some scientific method or technique. Yet that is precisely what the Tenth Circuit held in this case.

b. The Tenth Circuit's decision, although arguably consistent with the approach of the Second Circuit,[5] is also completely at odds with the rigorous *Daubert* scrutiny given in the Seventh and Eighth Circuits to expert engineering testimony proffered to prove (or disprove) design defects in product liability actions. For example, in *Pestel* v. *Vermeer Mfg. Co.*, 64 F.3d 382 (1995), the Eighth Circuit applied the *Daubert* factors in upholding the exclusion of a mechanical engineer's testimony that a stump cutter was defectively designed because it lacked a safety-bar guard. Chief Judge Arnold, writing for the court, explained that *Daubert* imposes on trial judges a "duty to screen such evidence for relevance and reliability" and to ensure that it is "scientifically based." *Id.* at 384. In that case, *Daubert* required that the expert testimony be excluded because (a) the expert "had not tested his guard"; (b) "the expert had not contacted others in the industry to

---

[5] In *McCullock* v. *H.B. Fuller Co.*, 61 F.3d 1038 (2d Cir. 1995), the court of appeals held that a consulting engineer could testify concerning whether a worker in a book bindery whose work station was near a glue pot was within the "breathing zone" of the glue fumes, even though the engineer had no formal education concerning fume dispersal patterns and no experience performing air quality studies. *Id.* at 1042-43. The Second Circuit held that the engineer's testimony was based on "specialized" rather than scientific knowledge, and was sufficiently supported by his "extensive practical experience" with fumes. *Id.* at 1043. Accord *Comer* v. *Edelson*, 1995 U.S. Dist. LEXIS 11077, at *12-*13 (S.D.N.Y. Aug. 4, 1995) (holding *Daubert* inapplicable to electrical engineering testimony concerning design of paint-spraying compressor and spray gun); *Lappe* v. *American Honda Motor Co.*, 857 F. Supp. 222, 228 (N.D.N.Y. 1994) (refusing to apply *Daubert* to assess the reliability of a mechanical engineer's testimony about the design of an automobile's foot pedals and roof on ground that *Daubert* applies only to the admissibility of novel scientific evidence). In other cases, the Second Circuit has limited *Daubert* to "the admissibility of *scientific* evidence." *Tamarin* v. *Adam Caterers, Inc.*, 13 F.3d 51, 53 (2d Cir. 1993) (emphasis added); see also *Iacobelli Constr.* v. *County of Monroe*, 32 F.3d 19, 25 (2d Cir. 1994).

see if they had attempted to create a similar type of guard" and "had not subjected his concept to any manufacturers, academicians, or engineering professors, for scrutiny"; and (c) the expert "had not performed a patent search to determine whether other guards existed or whether guards for stump cutters were feasible," and "had not talked to any operators who worked with this type of machinery." *Ibid.* Under these circumstances, the engineer's testimony "was not scientifically valid" and was properly excluded under *Daubert*. *Id.* at 384-85.

More recently, the Eighth Circuit confirmed its strict adherence to the *Daubert* framework in *Peitzmeier* v. *Hennessy Industries, Inc.*, 1996 U.S. App. LEXIS 26115 (Oct. 4, 1996), a product liability case involving a claim that a tire-changing machine was defectively designed. In upholding the exclusion of the testimony of plaintiff's engineering expert, the Eighth Circuit expressly rejected the argument that *Daubert* "applies only to novel scientific evidence" and is therefore "inapplicable" to opinions "founded on basic engineering principles." *Id.* at *7-*8. The court examined the proposed engineering testimony under each of the four *Daubert* factors and found it wanting. With regard to testing, for example, the court explained that the proposed expert

> concedes that he has neither designed nor tested for safety or utility any of the proposed safety devices that he claims are missing from the Hennessy tire-changing machine. His only demonstration of an alternative design is a series of rough sketches that have not been adapted into engineering drawings, much less prototypes. [The expert] has shown no factual basis to support an opinion that his design changes are feasible or that they would not hinder the efficacy of Hennessy's present tire-changing model.

Id. at *8. Thus, the "proffered testimony does not satisfy the first *Daubert* factor." *Id.* at *9; see also *id.* at *9-*11 (discussing other *Daubert* factors). As *Pestel* and *Peitzmeier* make clear, the Eighth Circuit, in sharp contrast to the decision below, strictly applies the *Daubert* factors to expert engineering testimony in product liability actions.

The same is true of the Seventh Circuit. For example, in *Cummins* v. *Lyle Indus.*, 93 F.3d 362 (7th Cir. 1996), the court

upheld the exclusion of an expert engineer's testimony concerning the allegedly defective design of an industrial trim press. The Seventh Circuit rejected the argument that because "this case does not involve a matter of pure scientific theory, but rather the application of well-known instruments of the engineering profession to a particular and not-out-of-the-ordinary application," a "substantial deviation from the paradigm announced by the Supreme Court in *Daubert*" is warranted. *Id.* at 367 n.2. Accord *United States* v. *Lee*, 25 F.3d 997, 999 (11th Cir. 1994) (per curiam) ("*Daubert* applies not only to testimony about scientific concepts but also to testimony about the actual applications of those concepts."). Turning to the *Daubert* factors, the court observed that previous Seventh Circuit decisions "have recognized the importance of testing in alternative design cases." *Cummins*, 93 F.3d at 368. In view of the complexity of the necessary inquiry into alternative designs, the Seventh Circuit faulted the expert for failing to "conduct any testing to substantiate his opinion that the alternative test designs feasibly could have been incorporated into the Lyle trim press." *Id.* at 369. With regard to peer review, the Seventh Circuit explained that the expert "ha[d] not published any writing or study concerning the incorporation of any of the alternative designs into a trim press such as Lyle's." *Id.* at 370.

In another product liability action, *Deimer* v. *Cincinnati Sub-Zero Products, Inc.*, 58 F.3d 341 (1995), the Seventh Circuit similarly applied "the *Daubert* methodology" in upholding the exclusion of an expert engineer's testimony concerning an alleged defect in a hypothermia machine (used to regulate the body temperature of patients during surgery). With regard to the engineer's opinion that the design of the detachable velcro strap used to hold the machine's electrical cord in place was defective, the Seventh Circuit ruled that plaintiff's expert "could not be characterized as scientific" because the expert "did not conduct any studies or analysis to substantiate his opinion." *Id.* at 344. Instead, the witness "proffered unverified statements that were unsupported by any scientific method." *Id.* at 345.

These rulings cannot possibly be reconciled with the decision below. Under the Tenth Circuit's view, the experts in *Pestel*, *Peitzmeier*, *Cummins*, and *Deimer* could have avoided judicial

scrutiny of their expert engineering opinions through the simple expedient of disclaiming reliance on any "principle," "technique," or "methodology" of engineering science. Had those experts instead merely asserted, as Bihlmeyer did, that they were relying on their personal observations and on their general experience or training as engineers, then the jury would have been permitted to hear their "expert" opinions.[6]

---

[6] The Seventh and Eighth Circuits are not alone in their application of *Daubert* to expert engineering testimony. On the contrary, many courts have applied the "list of reliability criteria articulated by the Supreme Court to ascertain whether mechanical design and engineering theories are 'scientifically valid.'" Nelson Apjohn & Suzanne Quill, *Post-'Daubert' Admissibility of Expert Testimony on Mechanical Design and Engineering Issues*, 23 PROD. SAFETY & LIAB. RPTR. 553, 553 (May 19, 1995). See, *e.g.*, *Carmichael* v. *Samyang Tires, Inc.*, 923 F. Supp. 1514, 1518-22 (S.D. Ala. 1996) (excluding testimony of engineer concerning design of tire); *Diviero* v. *Uniroyal Goodrich Tire Co.*, 919 F. Supp. 1353, 1356-57, 1359 (D. Ariz. 1996) (same); *Buckman* v. *Bombardier Corp.*, 893 F. Supp. 547, 555-57 (E.D.N.C. 1995) (excluding testimony concerning design of boat's keel, rudder, signal device, and stop switch); *Byrnes* v. *Honda Motor Co.*, 887 F. Supp. 279, 282 (S.D. Fla. 1994) (excluding testimony concerning design of motorcycle and absence of leg guard); *Hopkins* v. *NCR Corp.*, 1994 U.S. Dist. LEXIS 17273, at *19-*48 (M.D. La. 1994) (ruling inadmissible testimony of engineer concerning whether design of machine caused plaintiff to develop carpal tunnel syndrome), aff'd, 53 F.3d 1281 (5th Cir. 1995); *Stanczyk* v. *Black & Decker, Inc.*, 836 F. Supp. 565, 567-68 (N.D. Ill. 1992) (excluding engineer's testimony concerning the design of a miter saw). See also cases cited in note 4, *supra*.

In sharp contrast, the Second Circuit (see cases cited in note 5, *supra*) and district courts in several other circuits have refused to apply the *Daubert* factors to engineering testimony concerning design defects in consumer products. See, *e.g.*, *Freeman* v. *Case Corp.*, 924 F. Supp. 1456, 1466 (W.D. Va. 1996) (refusing to apply *Daubert* to testimony of mechanical engineer concerning design of riding mower on ground that *Daubert* does not apply in this "nonscientific context"; criticizing contrary decisions of Eighth Circuit in *Pestel* and Southern District of Florida in *Byrne* as "misguided"); *Edwards* v. *ATRO S.p.A.*, 891 F. Supp. 1074, 1082-84 & n.9 (E.D.N.C. 1995) (refusing to apply *Daubert* to

c. The Tenth Circuit's substantial reliance (see App., *infra*, 10a) on Bihlmeyer's experience in performing "numerous design analyses on the roof and roof support structure of various vehicles" during his eight-year career as a "consulting engineer" — a term the district court correctly described as "the time-worn euphemism for a professional witness" (*id.* at 17a) — is also in significant conflict with the approach of other circuits. For example, the Fourth Circuit has held that "it would be absurd to conclude that one can become an expert simply by accumulating experience in testifying." *Thomas J. Kline, Inc.* v. *Lorillard, Inc.*, 878 F.2d 791, 800 (1989), cert. denied, 493 U.S. 1073 (1990). Similarly, the Eighth Circuit in *Peitzmeier* rejected the argument that an engineer's theories concerning the allegedly defective design of a tire-changing machine had been subjected to peer review under *Daubert* because "he ha[d] testified about them in court in other products liability cases." 1996 U.S. App. LEXIS 26115, at *9; see also *id.* at *10 ("We reject the suggestion that cross-examination at trial and the number of * * * court appearances in design-defect cases can take the place of scientific peer review."); *Buckman* v. *Bombardier Corp.*, 893 F. Supp. 547, 556 (E.D.N.C. 1995) (rejecting argument that witness's "testimony and experiments in several cases as a product safety consultant" constitutes "some evidence of general acceptance" of expert witness's theories within the relevant scientific community). And

---

engineering testimony concerning design of pneumatic nail gun; explaining that such testimony is based on "traditional technical or mechanical expertise" and not on any "method" that is "novel"); *Officer* v. *Teledyne Republic/Sprague*, 870 F. Supp. 408, 410 (D. Mass. 1994) (refusing to apply *Daubert* to engineer's testimony concerning design of a valve; explaining that "[w]hile *Daubert*'s principles have valuable application in determining the admissibility of controversial and novel scientific hypotheses, they have less use in fields like design engineering where 'general acceptance' is the norm, not the exception"). See also Lisa Agrimonti, *The Limitations Of Daubert and Its Misapplication To Quasi-Scientific Experts*, 35 WASHBURN L.J. 134, 147-48 (1995) (arguing that "[u]sing *Daubert* to screen quasi-scientific experts such as engineers" is "impractical" and usurps the jury's function and noting "split among the courts" on this issue and "lack of uniformity in *Daubert*'s application, particularly with regard to quasi-scientific experts").

the Ninth Circuit, on remand from this Court's *Daubert* decision, has explained that "a very significant fact to be considered" in making the admissibility determination is "whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying." *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995) (Kozinski, J.). "That an expert testifies based on research he has conducted independent of the litigation provides important, objective proof that the research comports with the dictates of good science." *Ibid.* Accord *Pries* v. *Honda Motor Co., Ltd.*, 31 F.3d 543, 546 (7th Cir. 1994) (Easterbrook, J.) ("We find it comforting to see experts with analyses derived independently, rather than parroting a consistent (but often bogus) theory concocted by counsel.").

C. The Tenth Circuit's Decision Is Manifestly Incorrect.

The Tenth Circuit's decision is not only inconsistent with *Daubert* and in conflict with the rule applied in other circuits; it is also manifestly incorrect and — as this case compellingly shows — leads to absurd and indefensible results.

1. At bottom, the Tenth Circuit's analysis appears to be premised on a misreading of Rule 702, which provides:

> If scientific, technical, or other specialized *knowledge* will *assist the trier of fact* to understand the evidence or to determine a fact in issue, a witness *qualified as an expert* by *knowledge, skill, experience, training, or education*, may testify *thereto* in the form of an opinion or otherwise.

Fed. R. Evid. 702 (emphasis added). In *Daubert*, the Court made clear that the word "thereto" in Rule 702 refers back to the "scientific, technical, or other specialized knowledge" that is determined to be useful to the jury and that is the subject of the expert's opinion. The word "knowledge," this Court explained, implies that the proposed expert testimony or evidence must be *reliable*; and the phrase "assist the trier of fact" implies that it must be relevant. The Tenth Circuit's analysis, however, focuses on the different ways in which a person *may become qualified as an expert* to testify concerning "knowledge" that is "scientific, technical, or * * * specialized." But whether an expert's expertise

is acquired through "experience, training, or education," or is merely possessed by virtue of "knowledge" or "skill," in no way eliminates the requirement that the expert testify about some form of "knowledge" under Rule 702. Since the reliability requirement articulated in *Daubert* stems from the threshold "knowledge" requirement, the *source* of the expert's qualifications should not alter the need to show that the expert's testimony is reliable.

Nor is the Tenth Circuit's interpretation of Rule 702 even remotely administrable. The various methods by which an expert may become qualified under Rule 702 — through "knowledge, skill, experience, training, or education" — are overlapping and malleable, yet the Tenth Circuit's analysis singles out "training" and "experience" as a basis for avoiding *Daubert*. But knowledge and skill can be (indeed almost always are) *the result of* experience or training. To say that the *Daubert* framework disappears when the expert testifies from "experience" or "training" but not when he testifies from "knowledge" is thus to invite every expert merely to invoke the means by which he acquired his expertise, rather than the expertise itself, in presenting himself as an expert under Rule 702. And why should expertise based on "experience" be exempt from *Daubert* but not expertise based on "education" (seemingly a form of "experience")? It cannot be that the vital requirements set forth in *Daubert* are so easily circumvented.[7]

Moreover, the Tenth Circuit's decision, if permitted to stand, will lead to patently incorrect results. It would allow the expert witnesses who sought to provide testimony in *Daubert* to testify if, instead of seeking to justify their re-analysis, animal studies, and

---

[7] To make matters worse, in addition to limiting *Daubert* to instances where an expert purports to rely on some "principle," "technique," or "methodology" but not on his "experience or training," the Tenth Circuit indicated that *Daubert* applies only "in cases involving * * * methodologies or techniques" that are "*unique, untested, or controversial.*" App., *infra*, 9a (emphasis added). Taken together, those statements effectively render *Daubert* a dead letter in the Tenth Circuit. *Daubert* will be applicable only when an expert relies on some unique, untested, or controversial methodology and then only when that expert cannot make a colorable claim to be relying as well on his "experience" or "training."

pharmacologic studies as scientifically valid methods, they had instead vaguely invoked their "experience" and "training" as a basis for an asserted ability to discern a causal link between Bendectin and birth defects. Indeed, it is difficult to imagine *any* kind of scientific expertise that could not be recast as based on the expert's "experience" and "training." And because there is no grammatical basis in Rule 702 to allow this exception to *Daubert* based on "training" and "experience" for expert engineering testimony but not for other forms of "scientific, technical, or other specialized knowledge," the logic of the Tenth Circuit's analysis obviously extends to any kind of expert testimony. Under the Tenth Circuit's view, then, a DNA expert could ignore shortcomings in her technique or methodology by explaining that her opinion is in fact based on her "experience and training" in identifying genetic linkages; a damages expert in a contract case could present an opinion that departs substantially from the prevailing standards of property valuation by nebulously invoking his "experience" in "the business world"; and a medical doctor could opine (without any scientific basis to do so) that a person's condition was caused by a certain chemical by alluding to her "experience" or training in hospitals. That cannot be the law.

In view of the serious analytical flaws in the Tenth Circuit's opinion, it is not surprising that it has already been the subject of criticism. As one authority on product liability law has noted,

> under *Compton*, if an expert attempts to use a scientific methodology, it must be reliable and trustworthy. But if an expert forgoes reliance on any established technique or methodology and, instead, injects his own personal opinions, the "intellectual rigor" Chief Justice Posner referred to in *Rosen* purportedly is unnecessary. Does the *Compton* approach thereby penalize the expert who, laudably, at least attempts to consider science but reward the one who, lamentably, avoids it? Something seems awry.

Michael Hoenig, *New Cases on Experts After "Daubert"*, N.Y. LAW J. 6 (May 13, 1996); see also *ibid.* (*Compton* is "controversial" and deserves "a long, hard look before it becomes the order of the day" because it "creates an escape hatch by which *Daubert*'s reliability factors can be bypassed").

At least one other commentator has identified the basic fallacy on which the Tenth Circuit rested its decision:

> Failure to appreciate the relationship between science and nonscience could lead to absurd results. For instance, a clinical psychologist seeking to testify on "child abuse accommodation syndrome," a subject most jurisdictions correctly exclude as insufficiently supported by sound scientific research, could claim to be resting on "technical or other specialized knowledge." Hence, pseudoscientists could draw the perverse conclusion from *Daubert* that the key to admission is to remain unscientific in order to avoid standards they find difficult to meet.

David Faigman, *Making the Law Safe For Science: A Proposed Rule for the Admission of Expert Testimony*, 35 WASHBURN L.J. 401, 422 (1996) (footnote omitted). The Tenth Circuit's holding rests on exactly that "perverse conclusion." See also *id.* at 426 (describing this reasoning as "scary, for it implies that the key to admission for disciplines that desire admission as experts is to *not* test their hypotheses" whereas "*Daubert* * * * require[s] otherwise.") (emphasis in original). The key to avoiding that absurd result, Professor Faigman correctly explains, is to require that "[i]f a discipline advances testable hypotheses, they must be tested before [they are] advanced in court." *Ibid.*

The Tenth Circuit plainly failed to grasp the distinction between expertise that is based in scientific knowledge (such as Bihlmeyer's engineering testimony) and expertise that is nonscientific in nature and rooted in technical or specialized knowledge. As the Sixth Circuit has explained,

> The distinction between scientific and nonscientific expert testimony is a critical one. By way of illustration, if one wanted to explain to a jury how a bumblebee is able to fly, an aeronautical engineer might be a helpful witness. Since flight principles have some universality, the expert could apply general principles to the case of the bumblebee. * * * On the other hand, if one wanted to prove that bumblebees always take off into the wind, a beekeeper with no scientific training at all would be an acceptable expert witness *if* a proper foundation were laid for his conclusions. The foundation

> would not relate to his formal training, but to his firsthand observations. In other words, the beekeeper does not know any more about flight principles than the jurors, but he has seen a lot more bumblebees than they have.

Berry v. *City of Detroit*, 25 F.3d 1342, 1350 (6th Cir. 1994) (emphasis in original).

The Tenth Circuit evidently believed that Bihlmeyer was more like the beekeeper than like the aeronautical engineer, and that he could plausibly testify about the Subaru's proper roof strength without applying accepted principles of engineering. That was simply wrong. Given the multiple complex scientific variables that are implicated in the design of an automobile's roof, Bihlmeyer could not offer an expert opinion that the Subaru's roof was defective based merely on his observation of other crashed vehicles (each of which was the result of a unique accident involving different speeds, vehicle weights and designs, and conditions). See *Cummins*, 93 F.3d at 369 (summarizing numerous considerations that inform engineering testimony concerning product design). Bihlmeyer's "experience" as an engineer was entitled to credit, if at all, only because he had previously employed the tools of scientific engineering to the analysis of specific vehicles and accidents. For that reason, it makes no sense to permit Bihlmeyer to testify without a showing that his opinion is reliably based in the scientific knowledge that undergirds his engineering expertise. Under the Tenth Circuit's logic, however, the plaintiff could simply have called an experienced junkyard attendant to opine on whether the Subaru wagon's roof was defectively designed.[8]

2. If the Tenth Circuit had properly applied the *Daubert* framework and factors, there can be little doubt that it would have

---

[8] The Tenth Circuit's reliance on several of its previous cases, see App., *infra*, 8a (citing *United States* v. *Rice*, 52 F.3d 843 (10th Cir. 1995); *United States* v. *Markum*, 4 F.3d 891 (10th Cir. 1993); and *United States* v. *Muldrow*, 19 F.3d 1332 (10th Cir.), cert. denied, 115 S. Ct. 175 (1994)), was fundamentally misplaced because each of those cases involved nonscientific "specialized knowledge" that was acquired by the expert through direct observation, in sharp contrast to the complex engineering testimony based in scientific knowledge and methodology that is at issue here.

concluded that Bihlmeyer's testimony was inadmissible. It is undisputed that Bihlmeyer did not test the accident vehicle or the exemplar, and that he did not test his alternative design; it is undisputed that the standard he proposed vastly exceeded the applicable federal standard and was unsupported by any industry standard that had actually been implemented on a manufactured vehicle; and it is undisputed that Bihlmeyer had never published or subjected to peer review his novel theory of defect, and his opinion had been formed solely for the purpose of this litigation (and indeed was based largely on his "experience" as an expert witness for plaintiffs in other cases). The conclusion is inescapable that any automobile roof actually built to Bihlmeyer's specifications would have been wildly *unsafe*. The district judge correctly observed that Bihlmeyer's "seat-of-the-pants" design criteria seem "more applicable to a Sherman tank than to any vehicle which the ordinary consumer would drive." App., *infra*, 20a n.5.

In these circumstances, Bihlmeyer's testimony was plainly inadmissible under *Daubert*, because it consisted of mere "subjective belief or unsupported speculation" (*Daubert*, 509 U.S. at 590), and it would have been an abuse of discretion to admit it. "Experts cannot float their conclusions on cushions of air; they must rest those conclusions upon foundations built from reliable scientific explanation." *Navarro* v. *Fuji Heavy Indus., Ltd.*, 925 F. Supp. 1323, 1328 (N.D. Ill. 1996). As the district judge observed, Bihlmeyer had "little if any knowledge" about the subject matter of his testimony (App., *infra*, 25a), and his testimony about roof design was "the most ill-supported weakest personal opinion I've ever heard." Pet. C.A. App. 235. Allowing a jury to award almost $7 million in damages based solely on such "expert" testimony disregards the teachings of *Daubert*, insults the science of engineering, and fosters disrespect for the legal process.

D. The Issues Presented Are Important And Recurring.

It cannot seriously be disputed that this case presents a significant issue of federal law. As two Members of this Court explained in *Daubert* itself, the standards governing the admissibility of expert testimony in federal trials are an "important area of the law." 509 U.S. at 601 (Rehnquist, C.J., joined by Stevens, J., concurring in part and dissenting in part). The trial judge's duties under Rule 702 have, if anything, attained even

more significance in recent years as a consequence of the "enormous increase in the use of scientific evidence" in federal litigation. *Developments in the Law: Confronting the New Challenges of Scientific Evidence*, 108 HARV. L. REV. 1481, 1485 (1995). As this Court is acutely aware, the federal courts are being called upon with greater frequency to adjudicate a wide array of complex new disputes, including mass tort, product liability, and environmental litigation, whose outcomes depend in no small measure on the presentation of expert testimony. The increased use and importance of expert testimony has, in turn, prompted public "[c]oncerns with the abuse of the litigation process" to be "voiced ever more loudly." *Braun* v. *Lorillard Inc.*, 84 F.3d 230, 233 (7th Cir. 1996) (Posner, C.J.), petition for cert. filed, 65 U.S.L.W. 3185 (No. 96-377) (Sept. 11, 1996). See generally PETER HUBER, GALILEO'S REVENGE: JUNK SCIENCE IN THE COURTROOM (1991).

Equally plain, we submit, is the vital significance of the question whether, and how, the *Daubert* framework should be applied by trial judges to assess the admissibility of expert engineering testimony in product liability actions in the federal courts. Many if not most such actions include claims that consumer products are designed in a defective manner. Engineers are routinely called in these cases to demonstrate (or disprove) the existence of a defect. This case is accordingly representative of a broad category of federal litigation in which the district courts are struggling to apply *Daubert*. See notes 5-6, *supra*; see also *Daubert*, 509 U.S. at 600 (Rehnquist, C.J., joined by Stevens, J., concurring in part and dissenting in part) (predicting that "questions will surely arise when hundreds of district judges" seek to apply *Daubert*'s teaching). In addition, in many design defect cases, as in this case, liability turns on a "battle of the experts," and resolution of the admissibility question is outcome-determinative. The proper application of *Daubert* to expert engineering testimony is therefore an important question of federal law. And, as previously explained, it is a question as to which the circuits have provided conflicting answers.

What is more, the validity of the Tenth Circuit's new-found exception to *Daubert* is significant because it creates a gaping loophole that can be used to bypass the *Daubert* framework. In

this regard, the Tenth Circuit's analysis may represent only the latest — but certainly the most troublesome — of a series of "avoidance techniques" that, according to some commentators, judges have employed to avoid their "gatekeeping" obligations under *Daubert*. See *Developments*, 108 HARV. L. REV. at 1514; see also *Daubert*, 43 F.3d at 1315 (Kozinski, J.) (referring to the "daunting," "complex," and "difficult" tasks required under *Daubert* and to the "uncomfortable position" of trial judges). Because the Tenth Circuit's analysis contains the potential to insulate vast amounts of expert testimony from scrutiny for reliability and relevance, its correctness is of critical importance to the proper administration of Rule 702.[9]

The need for this Court's review is all the more pressing because, even in the short time since the Tenth Circuit's highly-publicized decision was announced, district courts have begun to rely on it to avoid *Daubert*. See *Liriano* v. *Hobart Corp.*, 1996 WL 304337, at *4-*5 (S.D.N.Y. July 23, 1996) (relying on and endorsing Tenth Circuit's analysis in rejecting request to exclude testimony of safety consultant; explaining that *Daubert* is inapplicable because expert relied on his "experience and training in the established field of industrial safety, and not on any novel scientific method or technique"); *Waitek* v. *Dalkon Shield Claimants Trust*, 1996 U.S. Dist. LEXIS 11141, at *51 n.10 (N.D. Iowa July 31, 1996) (relying on and endorsing Tenth Circuit's analysis in rejecting argument that *Daubert* applies to testimony of treating physician concerning whether plaintiff's

---

[9] The importance of the proper interpretation of *Daubert* and Rule 702, of course, extends beyond federal law. See, *e.g.*, *State* v. *Foret*, 628 So.2d 1116, 1121-27 (La. 1993) (adopting and applying reasoning of *Daubert* in construing identical language of La. Civ. Evid. art. 702; holding inadmissible testimony by child psychologist concerning Child Sexual Abuse Accommodation "Syndrome"); *E.I. Du Pont De Nemours & Co.* v. *Robinson*, 923 S.W.2d 549 (Tex. 1995) (adopting reasoning of *Daubert* in construing Tex. R. Civ. P. 702). See generally Michael Hoenig, *New Cases on Experts After "Daubert"*, N.Y. LAW J. 6 n.4 (May 13, 1996) ("Since many states have adopted evidence codes similar to the federal rules, *Daubert*'s reliability and admissibility criteria can exert an influence in state courts as well.").

illness was caused by Dalkon Shield; witness relied on his "experience and training" as a physician and not on any "particular methodology or technique"). Unless this Court quickly intervenes, there will no doubt be a large volume of unproductive litigation over the applicability of the Tenth Circuit's novel "exception" to *Daubert*, which authorizes the admission of expert evidence that is eccentric and methodologically unsound. In view of the obvious incompatibility between the opinion below and *Daubert*, the conflicts and confusion in the lower courts over whether and how *Daubert* applies in this context, and the general need for additional guidance in this important area of federal law, there is no good reason to permit the inevitable waste of judicial resources that would follow from a denial of review.[10]

Finally, it can hardly be denied that the issues presented in this case arise with overwhelming frequency. In the three years since *Daubert* was decided, the case has been cited some 450 times by the lower federal courts. Many, if not most, of those cases directly resolve issues of admissibility of expert testimony. Moreover, according to the most recent statistics compiled by the Administrative Office of the U.S. Courts, a total of 38,909 new product liability actions were filed in the federal district courts in the 12 months ending on June 30, 1996 alone. Administrative Office of the U.S. Courts, Statistics Division, ANNUAL REPORT OF THE DIRECTOR, table S-7 (unpub. 1996). As previously explained, many of those product liability actions include design defect claims and the presentation of expert engineering testimony. In these

---

[10] Courts and commentators have identified a number of ambiguities in the *Daubert* opinion and remarked on the divergence of interpretation in the lower courts and the need for further guidance from this Court. See, *e.g.*, *Rosen*, 78 F.3d at 318 (Posner, C.J.) (acknowledging "the uncertainty concerning the reach of the majority opinion" as "discussed in the Chief Justice's separate opinion"); App., *infra*, 15a n.1 (district court opinion); G. Michael Fenner, *The Daubert Handbook: The Case, Its Essential Dilemma, And Its Progeny*, 29 CREIGHTON L. REV. 939, 953 (1996); Michael Polentz, *Post-Daubert Confusion With Expert Testimony*, 36 SANTA CLARA L. REV. 1187, 1203 (1996); Lisa Agrimonti, *The Limitations Of Daubert and Its Misapplication To Quasi-Scientific Experts*, 35 WASHBURN L.J. 134, 147-48 (1995).

circumstances, further illumination by this Court of *Daubert*'s meaning and its application to an extremely common type of federal lawsuit (and a very common form of expert testimony) would provide helpful guidance to the "district judges and other front-line federal judicial officers" around the country who are charged, under *Daubert*, with "prevent[ing] litigation from * * * being degraded by 'junk science.'" *Braun*, 84 F.3d at 233 (Posner, C.J.).

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

RICHARD C. HITE
SCOTT J. GUNDERSON
Kahrs, Nelson, Fanning
Hite & Kellogg
200 West Douglas
Wichita, KS 67202
(316) 265-7761

KENNETH S. GELLER
Counsel of Record
STEPHEN M. SHAPIRO
ALAN E. UNTEREINER
Mayer, Brown & Platt
2000 Pennsylvania Ave., N.W.
Washington, D.C. 20006
(202) 463-2000

JOSEPH J. KUTER
Senior Counsel
Subaru of America, Inc.
Subaru Plaza
2235 Route 70 West
Cherry Hill, NJ
(609) 488-8572

OCTOBER 1996

APPENDIX A

UNITED STATES COURT OF APPEALS
TENTH CIRCUIT

STEVEN D. COMPTON,

Plaintiff-Appellee,

v.

SUBARU OF AMERICA, INC.; FUJI HEAVY INDUSTRIES, INC.,

Defendants-Appellants.

[FILED Apr. 30, 1996]

No. 94-3429

PRODUCT LIABILITY ADVISORY COUNCIL, INC.,

Amicus Curiae.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF KANSAS (D.C. No. 90-CV-1088)

Richard C. Hite (Scott J. Gunderson with him on the briefs), Kahrs, Nelson, Fanning, Hite & Kellogg, Wichita, Kansas, for Defendants-Appellants.

Lynn R. Johnson (Stephen N. Six and Patrick A. Hamilton with him on the brief), Shamberg, Johnson & Bergman, Chtd., Overland Park, Kansas, for Plaintiff-Appellee.

Marc R. Brosseau and Scott D. Peterson, Weller Friedrich, LLC, Denver, Colorado, and Hugh F. Young, Jr., Product Liability Advisory Council, Inc., Reston, Virginia, for Amicus Curiae.

Before PORFILIO, McWILLIAMS, and ALARCON,* Circuit Judges.

JOHN C. PORFILIO, Circuit Judge.

Steven D. Compton brought this products liability action after sustaining severe injuries in an automobile rollover accident. Mr. Compton sued the automobile manufacturer, Fuji Heavy Industries, Ltd. (Fuji), and the distributor, Subaru of America, Inc. (Subaru), alleging the accident vehicle was defectively designed. After a jury trial, Subaru and Fuji were found 56% at fault for Mr. Compton's injuries, and judgment was entered against them in the amount of $6,574,081.

On appeal, Subaru and Fuji raise two issues. First, they contend the district court erroneously admitted the testimony of Mr. Compton's design expert and thus failed to carry out its gatekeeping function as required under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993).[1] Second, Subaru and Fuji argue the district court improperly denied their renewed motion for judgment as a matter of law. We affirm.

I.

On the evening of February 19, 1988, Mr. Compton and four other teenaged friends consumed several six-packs of beer and drove around Scott County, Kansas, in a 1982 Subaru GL Station Wagon. While traveling on U.S. Highway 83, the teenagers spotted the automobile of Mr. Compton's ex-girlfriend. Tailing behind, the Subaru weaved back and forth across the yellow line until one of the teenagers reached over and yanked on the steering wheel, causing the driver to lose control. The Subaru skidded

---

* The Honorable Arthur L. Alarcon, Senior Circuit Judge for the United States Court of Appeals for the Ninth Circuit, sitting by designation.

[1] The Product Liability Advisory Council, Inc., filed an amicus brief in support of Subaru and Fuji urging us to apply *Daubert* to all expert testimony. However, as discussed below, we expressly decline to reach this issue.

across the highway, entered a ditch, and rolled over twice. During its first roll, Mr. Compton, seated in the rear seat behind the driver and not wearing a seatbelt, suffered a spinal cord injury resulting in quadriplegia.

Mr. Compton filed this action against Subaru and Fuji in February 1990. In his complaint, Mr. Compton alleged the accident vehicle was defectively designed because there was "excessive and extensive intrusion of the roof and side of the automobile into the passenger compartment during the rollover." According to Mr. Compton, he would have avoided serious injury during the rollover if the roof had not "collapsed inward" onto his head. Therefore, Mr. Compton asserted Subaru and Fuji were strictly liable for his injuries.

During trial, Subaru and Fuji objected to the proposed testimony of Mr. Compton's sole design expert, Larry Bihlmeyer, because they contended Mr. Bihlmeyer's background and experience did not qualify him as an expert on the design of automobile roofs or roof support structures. Furthermore, Subaru and Fuji urged Mr. Bihlmeyer failed to meet the requirements for expert testimony set out in *Daubert*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469. After a Rule 104(a) hearing conducted outside the presence of the jury, however, the district court ultimately concluded Mr. Bihlmeyer was sufficiently qualified and allowed him to testify.

Having survived the district court's initial scrutiny of his qualifications, Mr. Bihlmeyer, an aerospace and mechanical engineer, testified the design and roof support structures in the accident vehicle were defective because they permitted excessive roof crush. He then pinpointed areas of the roof structure where, in his expert opinion, additional support was required. To correct the alleged defects, Mr. Bihlmeyer testified he would design the vehicle to allow only 2 to 3 inches of roof crush. He also explained crush should be limited to ensure 33 inches of remaining headroom after an accident occurring at a speed of 50 m.p.h. Under this standard, the roof of the vehicle would be required to sustain average forces of between 48,000 and 71,000 pounds, which the district court remarked "seems more applicable to a Sherman tank than to any vehicle which the ordinary consumer would drive."

In arriving at his conclusion that the accident vehicle was defectively designed, Mr. Bihlmeyer relied upon his inspection of the accident vehicle and an identical, undamaged 1982 GL Subaru Station Wagon. Next, Mr. Bihlmeyer established his proposed roof crush and headroom requirements by comparing the headroom measurements in the accident vehicle with measurements compiled from hundreds of other accident vehicles he had examined during his eight-year career as a "consulting engineer." Mr. Bihlmeyer also used six other sources to support his proposed requirements: (1) a summary of a 1972 proposed, but not adopted, Ford Motor Company (Ford) standard which would have required a remaining headroom of 29.4 inches after roof crush on unnamed vehicles; (2) technical papers containing information about a Ford experimental safety vehicle which was not a production vehicle; (3) a 1966 proposed, but not adopted, federal standard for light utility vehicles with open bodies which would have required roll bars and a minimum of 33 inches remaining headroom after roof crush; (4) a Society of Automotive Engineers (SAE) paper presented by an engineer at Fiat, discussing the advantages of roof crush as an energy-absorbing device for seat-belted occupants; (5) Federal Motor Vehicle Safety Standard 216, which sets no requirements for remaining headroom after roof crush; and, (6) an SAE paper entitled "Field Studies of Rollover Performance," which studied rollover accidents involving British cars and light vans, but did not propose any headroom requirements.

At the close of Mr. Compton's case, and again at the close of all the evidence, Subaru and Fuji moved for judgment pursuant to Fed.R.Civ.P. 50(a), arguing Mr. Bihlmeyer's testimony was so ludicrous no reasonable juror could conclude his testimony was more likely than not true. In both instances, the district court denied the motions after carefully examining Mr. Bihlmeyer's testimony. Subsequently, the jury returned a verdict finding Subaru and Fuji 56% at fault for Mr. Compton's injuries. After the verdict, Subaru and Fuji renewed their Rule 50 motion, which the district court denied. Subaru and Fuji now appeal.

II.

Upon Subaru's and Fuji's motion, the district court heard argument regarding the admissibility of Mr. Bihlmeyer's testimony. Although expressing doubts about his credibility, the court

ultimately determined Mr. Bihlmeyer met the qualifications for expert testimony under Federal Rule of Evidence 702. The district court addressed *Daubert's* applicability and explained:

> I don't think the *Daubert* case has a lot to do with the problem that I'm faced with.... I don't think we're dealing with [a *Daubert* situation] here. Really. But to the extent that you might say that we are, clearly there's some scientific knowledge involved in the testimony of Mr. Bihlmeyer and it seems to me that ... his testimony ... is being offered and will assist the jurors to understand whether or not there is a design or manufacturing defect involved in this case. So to the extent the *Daubert* case is applicable, it's applicable.

Thus, the district court relied, in part, on *Daubert* in reaching its conclusion Mr. Bihlmeyer was qualified as an expert.

Subaru and Fuji now contend the district court erred in admitting Mr. Bihlmeyer's testimony. Under *Daubert's* test for the admissibility of scientific evidence, Subaru and Fuji argue Mr. Bihlmeyer's testimony should have been excluded because it lacked evidentiary reliability and was not grounded in any particular reasoning or methodology. They contend Mr. Bihlmeyer's testimony was nothing more than his personal opinion the roof of the accident vehicle was not sufficiently resistant to crush. Indeed, Subaru and Fuji assert Mr. Bihlmeyer did not rely on industry data and did not refer to any scientific principles or knowledge supporting his personal standard for roof crush resistance. Accordingly, because there was no peer review, no testing, and no evidence of general acceptance of Mr. Bihlmeyer's theory, Subaru and Fuji argue Mr. Bihlmeyer's testimony should have been excluded under *Daubert*.

In response, Mr. Compton contends *Daubert* is inapplicable to Mr. Bihlmeyer's nonscientific testimony. Mr. Compton asserts Mr. Bihlmeyer reached his conclusions based upon his own expertise and experience, not the methods and procedures of science. Therefore, Mr. Compton argues the district court correctly stated "[f]actors such as rate of error, peer review and acceptance in a 'relevant scientific discipline' have little, if any, bearing on mundane, 'professional witness' engineering testimony such as [Mr.] Bihlmeyer's." *Daubert* aside, Mr. Compton

contends the district court did not err in admitting Mr. Bihlmeyer's testimony.

The applicability of *Daubert* is a question of law which this court reviews **de novo**. *See, e.g., Bradley v. Brown*, 42 F.3d 434, 436 (7th Cir. 1994) ("we undertake a de novo review of whether the district court properly followed the framework set forth in *Daubert*"). However, once we determine *Daubert's* relevance and application, our review of the district court's decision to admit expert testimony is limited. We may reverse the district court only for abuse of discretion. *United States v. Barbee*, 968 F.2d 1026, 1031 (10th Cir. 1992).

We begin our analysis with a discussion of *Daubert's* impact on the law governing the admissibility of expert opinion testimony in a federal trial. Rule 702, which regulates the admission of expert testimony, states:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

Fed. R. Evid. 702.

Prior to *Daubert*, we recognized, under the Federal Rules, trial courts "are accorded broad discretion in determining the competency of expert witnesses." *Wheeler v. John Deere Co.*, 935 F.2d 1090, 1100 (10th Cir. 1991). Our cases further noted, however, the trial court "may not employ [this] discretion to restrict viable and relevant theories offered by a party." *Graham v. Wyeth Labs.*, 906 F.2d 1399, 1409 (10th Cir.), *cert. denied*, 498 U.S. 981, 111 S.Ct. 511, 112 L.Ed.2d 523 (1990). Instead, mindful of the "'liberal thrust' of the Federal Rules," *Beech Aircraft Corp. v. Rainey*, 488 U.S. 153, 169, 109 S.Ct. 439, 450, 102 L.Ed.2d 445 (1988), we have instructed, "the 'touchstone' of admissibility [under Rule 702] is helpfulness to the trier of fact." *Werth v. Makita Elec. Works, Ltd.*, 950 F.2d 643, 648 (10th Cir. 1991). Therefore, "as long as a logical basis exists for an expert's opinion ... the weaknesses in the underpinnings of the opinion[ ] go to the weight and not the admissibility of the testimony." *Jones v. Otis Elevator Co.*, 861 F.2d 655, 663 (11th Cir.1988); *see also*,

Orth v. Emerson Elec. Co., White-Rodgers Div., 980 F.2d 632, 637 (10th Cir. 1992).

The Supreme Court's decision in *Daubert* now mandates a further Rule 702 inquiry under certain circumstances. In *Daubert*, the Court considered the admissibility of novel scientific evidence. There, petitioners brought suit against Merrell Dow for birth defects allegedly caused by ingestion of the drug Bendectin during pregnancy. *Daubert*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469. Petitioners sought to introduce the testimony of several experts who relied upon animal rather than epidemiological (human statistical) studies in reaching their conclusion that Bendectin caused birth defects. Because petitioners' experts did not base their testimony on epidemiological evidence, the district court held the expert testimony failed to meet the "general acceptance" test as set out in *Frye v. United States*, 293 F. 1013 (D.C.Cir. 1923), 727 F.Supp. 570, 575 (S.D. Cal.1989). On appeal, the Ninth Circuit affirmed. 951 F.2d 1128 (1991).

After granting certiorari, the Supreme Court reversed. Rejecting the *Frye* test, the Court set out a new framework for determining the admissibility of expert scientific testimony:

> [T]he trial judge must determine at the outset, pursuant to Rule 104(a), whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue. This entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.

Daubert, 509 U.S. at 592-93, 113 S.Ct. at 2796. The Court then outlined a nonexhaustive list of factors courts should consider when reviewing a proffer of expert scientific testimony. These include whether the theory or technique has been tested, subjected to peer review or publication, is generally accepted within the relevant scientific community, or has a known or potential rate of error. *Id.* at 591-95, 113 S.Ct. at 2796-97. In considering these factors, the Court reminded, "[t]he focus, of course, must be solely on principles and methodology, not on the conclusions that they generate." *Id.* at 595, 113 S.Ct. at 2797.

The language in *Daubert* makes clear the factors outlined by the Court are applicable only when a proffered expert relies on some principle or methodology. In other words, application of the *Daubert* factors is unwarranted in cases where expert testimony is based solely upon experience or training. *See, e.g., United States v. Rice*, 52 F.3d 843, 847 (10th Cir. 1995) (citing *Daubert* but applying a traditional Rule 702 analysis to tax attorney's expert testimony which was based upon his personal experiences). In such cases, Rule 702 merely requires the trial court to make a preliminary finding that proffered expert testimony is both relevant and reliable while taking into account "[t]he inquiry envisioned by Rule 702 is ... a flexible one." *Daubert*, 509 U.S. at 589-95, 113 S.Ct. at 2795-97.

Subsequent to *Daubert*, we have continued to apply essentially the same Rule 702 analysis except in cases involving unique, untested, or controversial methodologies or techniques. In *United States v. Markum*, 4 F.3d 891 (10th Cir. 1993), for example, we cited *Daubert's* analysis of Rule 702 in upholding the district court's decision to permit a fire chief's testimony based upon personal observations and the observations of fellow fire-fighters. There, because no methodology or technique was implicated, we applied a traditional Rule 702 analysis. *Id.* at 895-96. Similarly, in *United States v. Muldrow*, 19 F.3d 1332, 1338 (10th Cir.), *cert. denied*, ___ U.S. ___, 115 S.Ct. 175, 130 L.Ed.2d 110 (1994), we again resorted to the conventional Rule 702 approach, permitting expert testimony by a police officer with specialized knowledge of drug trafficking. However, in *Muldrow*, we also applied the *Daubert* factors to the expert testimony of a forensic chemist to determine the reliability and relevance of his methodology. *Id.* at 1337.

In sum, we do not believe *Daubert* completely changes our traditional analysis under Rule 702. Instead, *Daubert* sets out additional factors the trial court should consider under Rule 702 if an expert witness offers testimony based upon a particular methodology or technique.

With this background in mind, we turn to the specific facts before us. We conclude, for reasons other than those urged by Mr. Compton, the district court erred in its application of *Daubert* in

this case.[2] Mr. Compton characterizes Mr. Bihlmeyer's testimony as nonscientific evidence and argues *Daubert* is inapplicable to such evidence. However, it is unnecessary to reach the question whether *Daubert* mandates a further inquiry into Mr. Bihlmeyer's "scientific, technical, or other specialized knowledge" under Rule 702 because we find his testimony was not based on any particular methodology or technique. Rather, Mr. Bihlmeyer reached his expert conclusions by drawing upon general engineering principles and his twenty-two years of experience as an automotive engineer. Absent some particular methodology or technique, *Daubert* simply has little bearing on Mr. Bihlmeyer's testimony.

Although the district court erred in applying *Daubert*, we nevertheless affirm the court's decision to permit Mr. Bihlmeyer's testimony because we are convinced the court fulfilled its responsibility under Rule 702.[3] The district court, after carefully reviewing Mr. Bihlmeyer's testimony, reluctantly concluded his testimony was "facially helpful and relevant." Moreover, citing *Wheeler v. John Deere Co.*, 935 F.2d 1090, 1100 (10th Cir. 1991), the court found Mr. Bihlmeyer "possessed the basic qualifications to give such testimony."

Subaru and Fuji argue Mr. Bihlmeyer was not qualified to give expert testimony under Rule 702 because he lacked experience designing car roofs or supporting structures. We disagree. The record reveals Mr. Bihlmeyer is an aerospace and mechanical engineer with twenty-two years of experience in automotive engineering. During his fourteen years at Ford, Mr. Bihlmeyer

---

[2] "When an issue or claim is properly before the court, the court is not limited to the particular legal theories advanced by the parties, but rather retains the independent power to identify and apply the proper construction of governing law." *United States Nat'l Bank v. Independent Ins. Agents of America, Inc.*, 508 U.S. 439, 446, 113 S.Ct. 2173, 2178, 124 L.Ed. 402 (1993) (quoting *Kamen v. Kemper Fin. Servs., Inc.*, 500 U.S. 90, 99, 111 S.Ct. 1711, 1718, 114 L.Ed. 152 (1991)).

[3] "We are free to affirm a district court decision on any grounds for which there is a record sufficient to permit conclusions of law, even grounds not relied upon by the district court." *United States v. Sandoval*, 29 F.3d 537, 542 n.6 (10th Cir. 1994) (quotations omitted).

spent nine years in the vehicle components engineering division and five years in vehicle engineering where he was involved in the development of the Ranger Supercab pick-up truck roof design. Although Mr. Bihlmeyer never conducted or observed rollover tests or static tests for roof crush while at Ford, in the eight years since leaving Ford to become a "consulting engineer," Mr. Bihlmeyer has performed numerous design analyses on the roof and roof support structures of various vehicles.

As long as an expert stays "within the reasonable confines of his subject area," our case law establishes "a lack of specialization does not affect the admissibility of [the expert] opinion, but only its weight." *Wheeler*, 935 F.2d at 1100 (mechanical engineer with expertise in the design of farm equipment permitted to testify on consumer expectations despite lack of experience in consumer sampling); *see also*, *Lavespere v. Niagara Mach. & Tool Works, Inc.*, 910 F.2d 167, 176-77 (5th Cir. 1990) (engineer experienced in designing devices similar to a brake press qualified to testify on safety of brake press), *cert. denied*, ___ U.S. ___, 114 S.Ct. 171, 126 L.Ed.2d 131 (1993). In this case, Mr. Bihlmeyer based his testimony upon general engineering principles and concepts. Although another witness might certainly have provided greater expertise in the area of roof design and support structures, nevertheless, we think Mr. Bihlmeyer's education and experience as an automotive engineer were sufficient to permit his testimony. Thus, we hold the district court did not abuse its discretion.

III.

Next, Subaru and Fuji argue the district court erred in denying their renewed motion for judgment as a matter of law made pursuant to Fed.R.Civ.P. 50(b). We review the district court's denial of a Rule 50(b) motion **de novo**, *Sheets v. Salt Lake County*, 45 F.3d 1383, 1387 (10th Cir.), *cert. denied*, ___ U.S. ___, 116 S.Ct. 74, 133 L.Ed.2d 34 (1995), applying the same standard used by the district court. *TK-7 Corp. v. Estate of Barbouti*, 993 F.2d 722, 723 (10th Cir. 1993). "Under this standard, we may find error only if the evidence points but one way and is susceptible to no reasonable inferences supporting the party for whom the jury found; we must construe the evidence and inferences most favorably to the nonmoving party." *Zimmerman v. First Fed. Sav.*

& Loan Ass'n of Rapid City, 848 F.2d 1047, 1051 (10th Cir. 1988).

Subaru and Fuji argue, first, the district court was "dutybound" to grant the Rule 50(b) motion in light of the court's serious reservations about the testimony of Mr. Compton's sole design expert, Mr. Bihlmeyer. We disagree. In its Memorandum and Order denying the Rule 50(b) motion, the district court commented, "[r]ereading Bihlmeyer's testimony has done nothing to change the court's extremely low opinion of Bihlmeyer's credibility and of the validity of his opinions." The court then correctly noted the weight and credibility of Mr. Bihlmeyer's testimony were issues for the jury, and concluded his testimony met the requirements under Rule 702. This finding was critical to the court's acceptance of Mr. Bihlmeyer's testimony. Having made its Rule 702 determination, the district court did not err in allowing Mr. Bihlmeyer's testimony despite the court's opinion of his testimony.

Second, Subaru and Fuji contend Mr. Bihlmeyer's testimony is insufficient under Kansas law because it amounted to a conclusory allegation the roof of the Subaru was too weak. To prove defective design under Kansas law, a plaintiff must do more than merely assert a different design was feasible. *Garst v. General Motors Corp.*, 207 Kan. 2, 20, 484 P.2d 47, 61 (1971); *see also*, *Meyerhoff v. Michelin Tire Corp.*, 852 F. Supp. 933, 947 (D. Kan. 1994), *aff'd*, 70 F.3d 1175 (10th Cir. 1995). However, after reviewing the record, we conclude Mr. Bihlmeyer identified at least six specific design defects and adequately supported his conclusions.

Finally, Subaru and Fuji assert Mr. Bihlmeyer's testimony was insufficient to rebut the presumption of nondefectiveness under the Kansas Product Liability Act (KPLA). Under KPLA:

> When the injury-causing aspect of the product was, at the time of manufacture, in compliance with legislative regulatory standards or administrative regulatory safety standards relating to design or performance, the product shall be deemed not defective by reason of design or performance,...unless the claimant proves by a preponderance of the evidence that a

> reasonably prudent product seller could and would have taken additional precautions.

Kan. Stat. Ann. § 60-3304(a). Subaru and Fuji argue their Rule 50(b) motion should have been granted because Mr. Compton provided no evidence the alleged regulatory standard, Federal Motor Vehicle Safety Standard (FMVSS) 216, 49 C.F.R. § 571.216, was inadequate or that additional precautions were necessary.

However, in this case, the parties contested the applicability of FMVSS 216, which "establishes strength requirements for the passenger compartment roof." 49 C.F.R. § 571.216. The district court found FMVSS 216 applied solely to the front pillars on either side of the windshield, known as the A pillars. Because Mr. Compton's injury occurred when the roof support pillars behind the rear doors (the C pillars) and the pillars behind the cargo deck (the D pillars) collapsed, the district court concluded Kan. Stat. Ann. s 60-3304(a) was inapplicable.

We review **de novo** the district court's interpretation of federal regulations. *Dodson v. Zelez*, 917 F.2d 1250, 1255 (10th Cir.1990). We have found few cases applying FMVSS 216 and none interpreting its scope. However, after reviewing the regulation, we are not convinced the district court's interpretation of FMVSS 216 was unreasonable. FMVSS 216's roof crush resistance tests for passenger cars require the application of force to "either side of the forward edge of a vehicle's roof." 49 C.F.R. § 571.216. Moreover, the regulation mandates "[b]oth the left and right front portions of the vehicle's roof structure shall be capable of meeting the requirements." *Id.* In view of FMVSS 216's emphasis on the A pillars, we cannot hold it explicitly applies to C or D pillar crush. Accordingly, because there appears to be no applicable regulation governing rear seat roof crush, we agree Kan. Stat. Ann. § 60-3304(a) has no application on these special facts.

Drawing all reasonable inferences in favor of Mr. Compton, we hold the district court did not err in denying the Rule 50(b) motion. The judgment of the district court is **AFFIRMED**.

APPENDIX B

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF KANSAS

STEVEN D. COMPTON, Plaintiff,

v.

SUBARU OF AMERICA, INC. and
FUJI HEAVY INDUSTRIES, LTD., Defendants.

CIVIL ACTION
NO. 90-1088-MLB

MEMORANDUM AND ORDER

Before the court are the following:

(1) Defendants' renewed motion JNOV and supporting memorandum;

(2) Plaintiff's response; and

(3) Defendants' reply.

The general standards applicable to motions JNOV under Federal Rule of Civil Procedure 50(b) are accurately stated in plaintiff's response (Doc. 135, pp. 6-8) and are not disputed by defendant. In *Marsh v. Coleman Co., Inc.*, 806 F. Supp. 1505, 1507 (D. Kan. 1992), this court summarized the standards as follows:

> Rule 50 of the Federal Rules of Civil Procedure provides that the court may enter judgment as a matter of law against a party who has been fully heard on a dispositive issue if "there is no legally sufficient evidentiary basis for a reasonable jury to have found for that party with respect to that issue, ..." The court must determine whether there is evidence from which a jury could find in favor of the party who has obtained a favorable verdict, and may grant the motion only if the evidence points but one way and is susceptible to no reasonable inferences which may support the opposing party's position. The court may not weigh the evidence or make credibility determinations, but must view the evidence most

> favorably to the non-moving party, giving that party the benefit of all reasonable inferences.

(citations omitted).

Defendants contend, as they did at trial, that the testimony of plaintiff's expert Larry Bihlmeyer was legally insufficient and should have been excluded. Bihlmeyer was plaintiff's only "design expert" and his opinions were essential to plaintiff's theory that the defective design of roof and supporting structures of the Subaru were the cause of plaintiff's injuries and damages. Defendants place great, although not exclusive, reliance upon *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, ___ U.S., ___, 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993). Basically, defendants contend that Bihlmeyer's testimony cannot satisfy the various factors set out in part II-C of *Daubert* for the admission of expert testimony under Federal Rule of Evidence 702.

Plaintiff responds, in essence, that Bihlmeyer's testimony was sufficient for purposes of Rule 50(b) on some, if not all, of plaintiff's defect claims (Doc. 135, p. 22). Plaintiff contends that defendants' motion really challenges just Bihlmeyer's credibility and the weight of his opinions, neither of which can serve as a basis for a JNOV.

Federal Rule of Evidence 702 provides:

> If scientific, technical, or other specialized knowledge will assist the trier-of-fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

In *Daubert*, the Supreme Court breaks Rule 702 into a two-part inquiry: "whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue." 113 S. Ct. at 2796. The Court indicates that the first part — "scientific knowledge" — "establishes a standard of evidentiary reliability," *id.* at 2795, and the second part — "assist the trier of fact to understand or determine a fact in issue" — "goes primarily to relevance," *id.* The Court emphasizes that:

> The inquiry envisioned by Rule 702 is ... a flexible one. Its overarching subject is the scientific validity — and thus the evidentiary relevance and reliability — of the principles that underlie a proposed submission. The focus, of course, must be solely on principles and methodology, not on the conclusions that they generate.

Id. at 2797.

In the present case, defendants do not challenge the relevance of the testimony offered by Mr. Bihlmeyer. Indeed, it is quite clear that expert testimony regarding the design of the Subaru's roof structure would assist the jury in understanding a fact in issue, i.e., whether or not the roof was defectively designed. Defendants focus instead on the term "scientific knowledge" and on the concept of evidentiary reliability. Defendants appear to contend that because Bihlmeyer's opinions did not meet *Daubert's* definition of "scientific knowledge," they should have been excluded as unreliable.

The Supreme Court does state that ". . . the subject of an expert's testimony must be 'scientific . . . knowledge.' The adjective 'scientific' implies a grounding in the methods and procedures of science. Similarly, the word 'knowledge' connotes more than subjective belief or unsupported speculation." *Id.* at 2795. It is noteworthy that the discussion in at least part II-B (and perhaps the entire opinion) is limited to "scientific" knowledge. In footnote 8, the Court notes: "Rule 702 also applies to 'technical, or other specialized knowledge.' Our discussion is limited to the scientific context because that is the nature of the expertise offered here."[1]

---

[1] The difference, if any, between "scientific" and "technical" or other specialized knowledge and the way it is to be handled by district judges trying to apply *Daubert* to particular cases is raised, but unfortunately not answered, by Chief Justice Rehnquist in his dissenting opinion.

> . . . In Part II-B, the Court concludes that reliability and relevancy are the touchstones of the admissibility of expert testimony. *Ante,* at 9. Federal Rule of Evidence 402 provides, as the Court points out, that "[e]vidence which is not relevant is not admissible." But there is no similar reference in the Rule to "reliability," The Court

constructs its argument by parsing the language "[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue . . . an expert . . . may testify thereto . . . ." Fed. Rule Evid. 702. It stresses that the subject of the expert's testimony must be "scientific . . . knowledge," and points out that "scientific" "implies a grounding in the methods and procedures of science," and that the word "knowledge" "connotes more than subjective belief or unsupported speculation." *Ante,* at 9. From this it concludes that "scientific knowledge" must be "derived by the scientific method." *Ante,* at 10. Proposed testimony, we are told, must be supported by "appropriate validation." *Ante*, at 10. Indeed, in footnote 9, the Court decides that "[i]n a case involving scientific evidence, *evidentiary reliability* will be based upon *scientific validity*." *Ante*, at 10, n. 9 (emphasis in original).

Questions arise simply from reading this part of the Court's opinion, and countless more questions will surely arise when hundreds of district judges try to apply its teaching to particular offers of expert testimony. Does all of this *dicta* apply to an expert seeking to testify on the basis of "technical or other specialized knowledge" — the other types of expert knowledge to which Rule 702 applies — or are the "general observations" limited only to "scientific knowledge?" What is the difference between scientific knowledge and technical knowledge; does Rule 702 actually contemplate that the phrase "scientific, technical, or other specialized knowledge" be broken down into numerous subspecies of expertise, or did its authors simply pick general descriptive language covering the sort of expert testimony which courts have customarily received? The Court speaks of its confidence that federal judges can make a "preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue." *Ante*, at 2796. The Court then states that a "key question" to be answered in deciding whether something is "scientific knowledge" "will be whether it can be (and has been) tested." *Ante*, at 2796. Following this sentence are three quotations from treatises, which speak not only of empirical testing, but one of which states that "the criterion of the scientific status of a theory is its falsifiability, or refutability, or testability," *ante*, pp. 2796-97.

Viewed most favorably to plaintiff, Bihlmeyer did not offer any "scientific" opinions. His opinions did not concern a complicated, experimental or esoteric topic at the cutting edge of science. Instead, Bihlmeyer's design defect opinions were of the "technical, or other specialized knowledge" variety; that is, they purportedly were engineering opinions derived from his training as an engineer and his experience working in the automotive industry and as an automotive "consulting engineer" (in this setting, the time-worm euphemism for a professional witness). Thus, it is not appropriate to apply *Daubert's* analysis of the term "scientific knowledge" to this case.[2]

> I defer to no one in my confidence in federal judges; but I am at a loss to know what is meant when it is said that the scientific status of a theory depends on its " falsifiability," and I suspect some of them will be, too.
>
> I do not doubt that Rule 702 confides to the judge some gatekeeping responsibility in deciding questions of the admissibility of proffered expert testimony. But I do not think it imposes on them either the obligation or the authority to become amateur scientists in order to perform that role. I think the Court would be far better advised in this case to decide only the questions presented, and to leave the further development of this important area of the law to future cases.

[2] One district court has declined to categorize proffered automotive design defect testimony as "scientific":

> The application of *Daubert* to the testimony in the present action, however, would require an expansion of the Supreme Court's language beyond its obvious scope and meaning. *Daubert's* narrow focus is on the admissibility of "novel scientific evidence" under Fed. R. Evid. 702. *See Daubert*, ___ U.S. ___, 113 S. Ct. 2786. *Daubert* only prescribes judicial intervention for expert testimony approaching the outer boundaries of traditional scientific and technological knowledge. *See id.*

Lappe v. American Honda Motor Co., Inc., 857 F. Supp. 222, 228 (N.D.N.Y. 1994).

The concept of reliability is discussed in part II-C of the opinion.[3] Four factors are set out: (1) whether the reasoning or methodology underlying the testimony can be and has been tested; (2) whether it has been subjected to peer review and publication; (3) its potential rate of error; and (4) whether it has been generally accepted or rejected in a relevant scientific discipline.

Three of these factors have no logical application to Bihlmeyer's opinions. Factors such as rate of error, peer review and acceptance in a "relevant scientific discipline" have little, if any, bearing on mundane, "professional witness" engineering testimony such as Bihlmeyer's. However, the testing factor arguably has some application in connection with the court's flexible inquiry into the principles and methodology underlying the opinion.

The court has reread Bihlmeyer's testimony. Bihlmeyer identified "basic engineering principles" which supported his opinions: structural analysis, structural engineering, structural mechanics, strength of materials, static versus dynamic loads, engineering analysis, and reliability and failure analysis. (Tr. pp. 17-34, 82-83). The methodology which Bihlmeyer claimed to have used to develop his opinions included inspection of the accident and exemplar cars, taking of measurements and photos, preparation of sketches, performance of a "design engineering review and analysis," review of depositions, and research and review of technical papers and vehicle specifications. (Tr. pp. 112-123). Bihlmeyer did not test the roof crush "standard" which he contended would have prevented plaintiff's injury.

The court has given considerable thought to defendants' argument that Bihlmeyer's testimony should be excluded because he did not do any testing. The problem with defendants' argument is that it focuses on Bihlmeyer's conclusions rather than on the methodology he used to reach them. The court is constrained by the Supreme Court's admonition that its focus must be solely on principles and methodology, *not on the conclusions that they*

---

[3] As before, the Court will assume that *Daubert's* discussion of reliability is applicable where the witness's testimony is of the "technical or other specialized knowledge" variety.

generate. This distinction is made clear in *Conde v. Velsicol Chemical Corporation*, 24 F.3d 809, 813 (6th Cir. 1994): "The holding in *Daubert* . . . deal[s] only with the circumstances under which expert testimony is admissible, and not with the separate question of when such testimony is sufficient to submit a case to the jury." The court simply cannot find that a failure to test, standing alone, is fatal to the methodology which Bihlmeyer claimed to have used in developing his opinion. For example, there was no testimony that testing is an essential element in the methodology of development of engineering opinions such as those given by Bihlmeyer.[4] In the end, Bihlmeyer's failure to test goes to the reliability of his conclusions, not to his methods.

Therefore, the court concludes that to the extent *Daubert* is applicable to Bihlmeyer's opinions, the *Daubert* requirements are satisfied.

The court has been unable to find a Tenth Circuit decision which thoroughly analyzes *Daubert*. However, applicable pre-*Daubert* decisions of the Tenth Circuit are not in conflict with *Daubert*. The "touchstone" of admissibility of expert testimony is helpfulness to the jury. *Werth v. Makita Electric Works, Ltd.*, 950 F.2d 643, 648 (10th Cir. 1991). The subject matter of Bihlmeyer's testimony — automotive design — was facially helpful and relevant. By Tenth Circuit standards, Bihlmeyer possessed the basic qualifications to give such testimony. The fact that Bihlmeyer never designed a car roof and supporting structures was not disqualifying, *Wheeler v. John Deere Company*, 935 F.2d 1090, 1100 (10th Cir. 1991), nor was his failure to conduct tests, *Werth*, *supra* at 650. Although there are Tenth Circuit decisions which say that district courts have broad discretion in determining the competency of expert witnesses, *e.g.*, *Wheeler*, *supra* at 1100, it is pretty clear that a district court in this circuit runs a substantial risk of reversal if it prohibits or restricts the testimony of an apparently

---

[4] One court, applying *Daubert*, has held that an expert's failure to test an alternative design rendered his opinion inadmissible. *Stanczyk v. Black and Decker, Inc.*, 836 F. Supp. 565 (N.D. Ill. 1993). While the ruling has certain practical appeal, it remains to be seen whether it will be widely followed.

qualified expert on a relevant issue. *See Graham v. Wyeth Laboratories*, 906 F.2d 1399, 1408 (10th Cir. 1990), *cert. denied*, 498 U.S. 981 (1990).

These conclusions return the court to the standards for JNOV. Rereading Bihlmeyer's testimony has done nothing to change the court's *extremely low* opinion of Bihlmeyer's credibility and of the validity of his opinions.[5] However, the court's initial decision under Fed. R. Evid. 104(a) as to whether Bihlmeyer would be allowed to testify had to be made, and was made, albeit reluctantly, on Bihlmeyer's qualifications and the subject matter of his testimony. (Tr. pp. 197-198). It would have been improper for the court to decide that issue according to its own view. *Kingsley Associates, Inc. v. Del Met, Inc.*, 918 F.2d 1277, 1286 (6th Cir. 1986). This court's analysis of *Daubert* and the ultimate issue of whether Bihlmeyer's opinions were sufficient to justify the jury's verdict certainly deserve a thorough review by the Court of Appeals. However, this court is bound by Rule 50 and its own rulings which prohibit it from weighing evidence and making credibility determinations. This rule seems to have particular application when the evidence in question involves expert opinion. *Wilson v. Merrell Dow Pharmaceuticals, Inc.*, 893 F.2d 1149, 1155 (10th Cir. 1990). The court simply cannot find, viewing all the evidence most favorably to plaintiff and affording plaintiff the benefit of all reasonable inferences, that there is no legally sufficient basis for a reasonable jury to have found for plaintiff.

Accordingly, defendants' JNOV motion (Doc. 131) is denied.

IT IS SO ORDERED.

Dated this 15th day of November, 1994, at Wichita, Kansas.

/s/MONTI L. BELOT
MONTI L. BELOT
United States District Judge

---

[5] For example, Bihlmeyer's design criterion, which would limit roof crush to no more than 2½ inches under average forces of 48,000 to 71,000 pounds, seems more applicable to a Sherman tank than to any vehicle which the ordinary consumer would drive.

APPENDIX C

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF KANSAS

STEVEN D. COMPTON, Plaintiff,

v.

SUBARU OF AMERICA, INC. and
FUJI HEAVY INDUSTRIES, LTD., Defendants.

CV-N-90-1088-MLB

TRIAL TRANSCRIPT

* * *

[Tr. 613]

THE COURT: Well I'm going to talk to the lawyers for a minute, Ladies and Gentlemen. You may as well relax in your jury room while I do this. So remember and heed the admonition and as soon as I'm ready I'll have somebody come and get you.

(Jury leaves the courtroom.)

[Tr. 614]

THE COURT: Let's take about five minutes then I'll allow you to make any short argument that you want to make and I'll make my ruling.

(Recess.)

(Jury is not present.)

THE COURT: Now the jury is in the jury room and I will hear from Counsel briefly on this limited issue of Mr. Bihlmeyer's qualifications to testify.

MR. HITE: Your Honor, I can be very brief. We're talking in this case about a 1982 Subaru. The design of the roof was certainly well before that, although we do not have the exact time established. Mr. Bihlmeyer came in Court and offered his Ford Motor Company experience as primary evidence on his expertise

on the design of roof structures of vehicles. When we get into that in any detail it turns out that his experience is practically nonexistent. He was never in the roof structures design department and the light truck engineering department was never in the automobile or station wagon engineering department. The best that he can say is at one time while he was also consumed by many other duties he was a liaison between those that design and those that manufacture or who would be responsible for the manufacture. He has acknowledged that he has never selected the parts or materials or determined the strength integrity, compressibility or rigidity or otherwise of the roof

[Tr. 615]

structure of any vehicle.

We believe that his experience in consulting years much later where he apparently has formed some personal judgments about designs comes too late and that it constitutes, a — does constitute a personal judgment with none of the safeguards required by the Daubert case.

For all of those reasons we object to testimony of Mr. Bihlmeyer as an expert on the design of roofs or roof support structures of automobiles.

Our objection on the welding aspects is even briefer. He's acknowledged that he's not a metallurgist. He is not an expert on materials. He has acknowledged that he has testified in another case that his expertise in this area is in kind of a gray area; and so far as pertinent here, he says that he has two primary qualifications, one being the involvement in, but not writing of some spot weld specifications; and the other in writing the specifications for arc welding which is not the type of welding we're doing here. For those reasons we also object to his expertise as a welding expert.

MR. JOHNSON: Your Honor, we're dealing here with basic mechanical engineering principles and specifically dynamic mechanical engineering principles as relates to a product's response to dynamic forces that may be expected to be imposed upon the product. Specifically, Mr. Bihlmeyer

[Tr. 616]

has a master's degree in mechanical engineering; he has many years experience in automotive engineering; and he specifically has experience as a design engineer. There can be no question but what he is by education, experience and training a mechanical engineer, a design engineer and an automotive engineer. Specifically he is an automotive engineer as relates to the relationship of dynamic forces on a product or part of a product, or for that matter the entire vehicle. He has designed wheels and welds and weld locations for wheels and the strength of wheels that obviously undergo significant dynamic forces during the ordinary use of a vehicle. He has been involved in the design of roof — I'm sorry, of fuel systems. Fuel systems which must be designed in a way to avoid intrusion into the area of the systems in order to avoid serious injury or death from piercing into the roof — I mean piercing into the fuel system and causing spillage of fuel, thus relating to crashworthiness.

Specifically, when he advanced in Ford Motor Company to a point where he was involved with this group of designers who were changing the Ranger to a Ranger super cab he had specific responsibility of overseeing the change of that design from the Ranger to the Ranger roof cab. Point of the matter is that as a mechanical design engineer with extensive experience in designing products that have to withstand dynamic loads, he is certainly qualified to testify

[Tr. 617]

about a roof and roof support members because we're obviously talking about dynamic loads that are applied.

The Tenth Circuit is very clear about qualification of experts. In the case of Wheeler vs. John Deere it was stated emphatically that in a products liability action an expert witness is not strictly confined to his area of practice, but may testify concerning related applications. A lack of specialization does not affect admissibility of the opinion, but only its weight. It goes on to talk about a number of different cases where engineers, mechanical engineers, had absolutely no experience with regard to the specific product and they were allowed to testify and it is clear that they were qualified to testify. And the only thing that the lack of experience goes to is the weight. Here we have a man who is experienced.

Of course he has not designed from top to bottom a roof and roof support structure. But he's an automotive engineer with tremendous background and knowledge of automobiles and their systems and their parts. And he does have specific background and training and experience with regard to roof and roof design as relates to that Ranger pickup going to the super cab. So under the law that I — as I can see it, this man is not only qualified, but very well qualified. Daubert doesn't enter into this because that relates to, you know, really doing away with the old Fry test which is, you know, the scientific

[Tr. 618]

studies and technology, and he's not done any of those types of tests or anything so I don't think that really is involved.

With regard to the welding, I think there's been ample testimony that welding is a part of the design criteria to insure the strength of a particular product to avoid intrusion from dynamic forces. He's not a welder and he's not a metallurgist and we're not offering him for that purpose. We're offering him for the purpose of talking about what is appropriate in terms of location of welds and types of welds to insure structural integrity. And, by the way, I don't think there's anything any place that I've ever heard of that says that a mechanical engineer has to have been doing mechanical engineering on a particular product at the time it was designed in order to testify. I know in medical malpractice cases I think the doctor has to be in clinical practice at the time of the incident, but I don't think that applies at all here in this case.

THE COURT: Well, I think you're basically right, Mr. Johnson. I don't think the Daubert case has a lot to do with the problem that I'm faced with. The Supreme Court says: Faced with a proffer of expert scientific testimony the trial judge must determine at the outset pursuant to Rule 104(a), whether the expert is proposing to testify to scientific knowledge that will assist the trier of fact to

[Tr. 619]

understand or determine a fact in issue. Then it goes on to say: This entails a preliminary assessment of whether the reasoning and methodology underlying the testimony is scientifically valid. I don't think we're dealing with that here. Really. But to the extent

that you might say that we are, clearly there's some scientific knowledge involved in the testimony of Mr. Bihlmeyer and it seems to me that, while I have to say for the record I still don't exactly know what his testimony is going to be about design and manufacturing defects, I'm assuming that it will — is being offered and will assist the jurors to understand whether or not there is a design or manufacturing defect involved in this case. So to the extent the Daubert case is applicable, it's applicable.

And I think you're right, I think when you get right down to it, Wheeler vs. John Deere is the case that I've got to follow here. Wheeler was decided in 1991 but I think it's still good law. It not only is from the Tenth Circuit, but it comes right out of this court, not this judge but this court, and I think the Tenth Circuit in this case announces or, rather, reaffirms its position of extreme liberality with respect to admissibility of expert testimony in products liability cases. I don't think there's any requirement that I know of, none has been cited to me, that in a products liability case an engineer has to be involved

[Tr. 620]

in or studying the particular type of engineering, has studied the particular type of product or engineering that he or she is prepared to testify about. There's no greater example than the man that we're all familiar with and that is George Green. At least I'm familiar with him and Mr. Johnson is familiar with him. I expect Mr. Hite is, too. He testified in every court in the United States and nobody's ever succeeded, to my knowledge, in keeping him from testifying. He's a mechanical engineer that knows about every mechanical device known to man. Whether juries believe him or not is another matter. But I think that's the rule.

Frankly, I'm not here to judge the weight or credibility of this man's testimony. If I was, he wouldn't be testifying in this case because as far as I'm concerned as the judge — I will not communicate this to the jury — but as far as I'm concerned, he has little if any knowledge about what he is purporting to testify about. I think that his qualifications — you make it sound like this man is the biggest welding expert in the United States because he had something to do with wheels on Ford cars. Well that doesn't have anything to do with this case. And I listened carefully. He doesn't

know beans about welding in my opinion and he knows very little about roofs in my opinion. He didn't have hardly anything to do with the changeover of a roof from the regular cab of this pickup truck to the super

[Tr. 621]

cab; but I'm not here to judge credibility. In my opinion, they can find somebody that would be a lot better expert. Probably the best expert for this type of situation would be somebody with a 6th grade education who had built sprint cars for 25 years and seem 'em roll over every Saturday night for 25 years and improved on the roof structure. But, as I say, this is the dilemma that every district judge faces in these types of cases where you have what the judge feels is a marginal expert, really doesn't know much about what he's here to talk about, but the judge doesn't make that decision because that's the credibility of the expert. His qualifications under the Tenth Circuit standard apparently are enough. They're so liberal in their rulings that his qualifications are enough to allow him to testify. So I'm going to allow him to testify about the design and manufacturing defects that he apparently found in this automobile.

But, now I'm looking now at the Defendant's supplemental trial brief, on Page 5, suggests that this witness also wants to talk about — Page 6, rather, the inadequacy — his opinion as to the inadequacy of FMVSS 216. And I don't know whether he's getting into — I don't know what his testimony is about that. I've heard nothing along those lines; but I have heard nothing to indicate that this man is qualified in any manner to give any opinions as to

[Tr. 622]

whether or not that standard is adequate or inadequate; nor have I heard anything to suggest that this man is qualified to give any testimony regarding the existence of industry standards apart from FMVSS 216 which is a government standard. So if there's a plan here to allow him to testify about industry standards or deviation from industry standards, I will not allow him to testify about that. I don't know where we're coming from on that but I remember a discussion that we had in chambers I think and something about industry standards and I haven't heard anything in what I've heard

today that indicates he knows anything about industry standards for design of a roof or anything like that.

MR. JOHNSON: Well, Your Honor, I might say two things: First of all, I would very respectfully say that I do not believe that the statements you just made about this man's qualifications is probative or appropriate.

THE COURT: Why not?

MR. JOHNSON: I can assure —

THE COURT: It's entirely appropriate. In the context that we are right now because this is exactly what happens in these cases, Mr. Johnson, and you know it. A judge, a trial judge allows a witness with the marginal qualifications and knowledge that this man has to testify in a case and then either the Plaintiff or the Defendant,

[Tr. 623]

depending on who's calling him says to the jury, well, you were allowed to testify as an expert in such and such a case and such and such a case, makes it sound like the man has the official stamp of approval of the judge. He does not have my stamp of approval. The only thing I'm talking about here is I'm following what I perceive to be the law from the Tenth Circuit about his testimony but I certainly, as the judge, am not going to, by allowing him to talk to the jury, put the stamp of approval on what I perceive to be his expertise because I perceive it to be little or none in this area. But that's on the basis of credibility and I'm not the judge of credibility here.

MR. JOHNSON: Your Honor if I just — I'm constrained to say something and that —

THE COURT: I want you to say what you want to say. You know I'll let you.

MR. JOHNSON: That is that in my opinion — and I'm not the Court — in my opinion a mechanical engineer or a structural engineer from Kansas State University or Texas A & M would be imminently qualified to talk about the design of a roof. All a roof is is a mechanism by which to support and protect the people

inside. It has nothing unusual about it in terms of dynamic intrusion. It has nothing unusual about it in terms of static testing. These are commonplace and ordinary and oft repeated basic engineering principles and I

[Tr. 624]

would greatly disagree that this man with a master's degree in mechanical engineering and with the experience that he's had is not qualified in your opinion to testify about a structure. I mean, it's like we're saying automobile roofs are some esoteric thing that only someone who has worked for, you know, do you want five years, ten years, 15 years, in designing a roof. I mean, a roof is not a unique product. I'm not arguing with the Court but I just — I feel constrained to say these things because, frankly, I'm taken aback and am nonplused by the comments of the Court.

Secondly, with regard to what he —

THE COURT: But you won. I'm going to allow him to testify and the jury is not going to hear my opinions regarding him at all.

MR. JOHNSON: I understand.

THE COURT: You can make your argument at the end of the case that he's the greatest engineer that ever came down the pike, Mr. Johnson. And I won't interfere with it. I won't — I can comment on the evidence, but I won't. Okay.

MR. JOHNSON: The only other thing in my mind, it is a direct implication about me also, Your Honor.

THE COURT: No. You know very — you and I have known each other for 25 years and you know that there's no implication about you at all here.

MR. JOHNSON: But I'm the one putting this

[Tr. 625]

witness —

THE COURT: Let's just put that aside.

MR. JOHNSON: I'm the one putting this witness in front of the jury. And I can tell you that I wouldn't be putting him here unless I personally felt that this man was qualified.

THE COURT: If I thought it was anything else I would say something about it, but it doesn't have anything to do with you at all. And there's nothing — please draw nothing from that. You ought to know based on what I said to the jury about you and Mr. Hite, as well as as long as we've known each other, that I have the absolute highest regard for you and for Mr. Hite. So let's go on beyond that. Okay.

MR. JOHNSON: Now, with regard to the design defects he's going to talk about. I'm a little confused as to exactly what you're saying because perhaps it might be appropriate for, you know, before we start blundering into this, for you to take a look at one of the exhibits which has, you know, his opinions and conclusions on it because I don't want to be in a position where I'm up asking about these various opinions and in design defects —

THE COURT: Well, I don't know. The problem is, you see, I don't know what his opinions and conclusions are except in a very broad context; but I have some very severe reservations about allowing him to come in here, as

[Tr. 626]

apparently he's going to do, and say that he disagrees with the federal safety standard and would do something else. Now, if that's what he's going to talk about, I have some real doubts about that.

MR. JOHNSON: He's going to talk about Federal Motor Vehicle Safety Standard 216.

THE COURT: All right.

MR. JOHNSON: And I think you will see that he is somewhat knowledgeable about it.

THE COURT: That's — I have no problem with that. If he can — he can talk about that all he wants.

MR. JOHNSON: And that that standard is a standard that should be met but it's not the only thing that should be met when an engineer is designing a vehicle.

THE COURT: All right.

MR. JOHNSON: And that's —

THE COURT: Well I know you've got a negligent design claim here and I'll listen to what he has to say but — well let me just leave it at that — I'll listen to what he has to say.

MR. JOHNSON: The FMVSS 216 doesn't even apply to the C and D pillar anyway. It applies to the A pillar.

THE COURT: Then why are we talking about it so much?

MR. JOHNSON: Because they did a 216 test on the C

[Tr. 627]

and D pillar and I think that's what I need to talk with him about is, you know, what's it designed for and knows about that, it's designed for the A pillar. There's no question about that. They did it on the C and D pillar. So we're going to talk about it. But it's not a bar to recovery here based on the Kansas product liability. It doesn't apply to the C and D pillar.

THE COURT: I recognize, I think, what the law is about that particular standard.

MR. JOHNSON: I've said my peace.

THE COURT: All right. Let's get the jury — do you have anything to say, Mr. Hite?

MR. HITE: No, sir.

THE COURT: You guys know what's coming down the pike here. I don't. So if you've got anything else to say to me, let me know. All right. Let's get the jurors.

(Jury enters the courtroom.)

* * *

APPENDIX D

UNITED STATES COURT OF APPEALS
FOR THE TENTH CIRCUIT

STEVEN D. COMPTON,

Plaintiff-Appellee

v.

SUBARU OF AMERICA, INC.;
FUJI HEAVY INDUSTRIES,
INC.,

No. 94-3429
(D.C. No. 90-CV-1088)

Defendants-Appellants.

PRODUCT LIABILITY ADVISORY
COUNCIL, INC.,

Amicus Curiae.

ORDER
ENTERED July 25, 1996

Before PORFILIO, McWILLIAMS, and ALARCON,* Circuit Judges.

---

*The Honorable Arthur L. Alarcon, Senior Circuit Judge for the United States Court of Appeals for the Ninth Circuit, sitting by designation.

This matter comes on for consideration of appellants' petition for rehearing and suggestion for rehearing in banc.

Upon consideration whereof, the petition for rehearing is denied by the panel that rendered the decision.

In accordance with Rule 35(b), Federal Rules of Appellate Procedure, the suggestion for rehearing in banc was transmitted to all of the judges of the court who are in regular active service. No member of the panel and no judge in regular active service on the

court having requested that the court be polled on rehearing in banc, Rule 35, Federal Rules of Appellate Procedure, the suggestion for rehearing in banc is denied.

Entered for the Court
PATRICK FISHER, Clerk
By_____
Deputy Clerk

(2)

Supreme Court, U.S.
FILED
NOV 14 1996
CLERK

No. 96-645

IN THE

Supreme Court of the United States

OCTOBER TERM, 1996

SUBARU OF AMERICA, INC., and
FUJI HEAVY INDUSTRIES, INC.,
Petitioners,

v.

STEVEN D. COMPTON,
Respondent.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Tenth Circuit

---

BRIEF IN OPPOSITION

LYNN R. JOHNSON
Counsel of Record
STEPHEN N. SIX
PATRICK A. HAMILTON
SHAMBERG, JOHNSON & BERGMAN, CHTD.
4551 W. 107th St., Ste. 355
Overland Park, KS 66207
(913) 642-0600

STEPHEN R. MCALLISTER
University of Kansas
School of Law
Green Hall
Lawrence, KS 66045
(913) 864-4550

WILSON - EPES PRINTING CO., INC. - 789-0096 - WASHINGTON, D.C. 20001

31 pp

QUESTION PRESENTED

Did the district court abuse its discretion in this case in admitting the expert engineering testimony of Larry Bihlmeyer—an engineer with over fifteen years of experience in automobile design matters—on the issue of the roof design of the 1982 Subaru station wagon?

TABLE OF CONTENTS

	Page
QUESTION PRESENTED	i
TABLE OF AUTHORITIES	iv
STATEMENT OF THE CASE	1
A. Steven Compton's Injury	1
B. Larry Bihlmeyer's Qualifications	1
C. The District Court's Rejection Of Petitioners' Challenges To Bihlmeyer's Testimony	7
D. The Tenth Circuit Affirmed The District Court's Factbound Determination, Concluding That The Court Did Not Abuse Its Discretion	9
REASONS FOR DENYING THE WRIT	11
I. THE TENTH CIRCUIT'S DECISION WAS CORRECT	11
A. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*	11
B. The Tenth Circuit's Decision Is Consistent With *Daubert*	15
II. PETITIONERS ARE CHALLENGING THE DISTRICT COURT'S FACTBOUND APPLICATION OF SETTLED LAW WHICH IS REVIEWABLE ONLY FOR AN ABUSE OF DISCRETION	17
III. PLENARY REVIEW BY THIS COURT WOULD NOT ALTER THE OUTCOME IN THIS CASE, BECAUSE THE DISTRICT COURT APPLIED THE *DAUBERT* FACTORS	20
IV. THERE IS NO CONFLICT OF AUTHORITY IN THE CIRCUITS ON THE FACTBOUND ISSUE PRESENTED IN THIS CASE	21
CONCLUSION	26

TABLE OF AUTHORITIES

Cases: Page

Anderson v. F. J. Little Machine Co., 68 F.3d 1113 (8th Cir. 1993) 25
Berry v. City of Detroit, 25 F.3d 1342 (6th Cir. 1994), *cert. denied*, 115 S. Ct. 902 (1995) 20
Carroll v. Litton Systems, Inc., 47 F.3d 1164 (4th Cir.), *cert. denied*, 116 S. Ct. 70 (1995) 19
Carroll v. Morgan, 17 F.3d 787 (5th Cir. 1994) 23
Cummins v. Lyle Indus., 93 F.3d 362 (7th Cir. 1996) 24, 25
Daubert v. Merrell Dow Pharmaceuticals, Inc., 43 F.3d 1311 (9th Cir.), *cert. denied*, 116 S. Ct. 189 (1995) 19
Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993) ..... *passim*
Deimer v. Cincinnati Sub-Zero Products, Inc., 58 F.3d 341 (7th Cir. 1995) 24, 25
Frye v. United States, 54 App. D.C. 46, 293 F. 1013 (1923) 11, 12, 14
Habecker v. Clark Equip. Co., 36 F.3d 278 (3d Cir. 1994), *cert. denied*, 115 S. Ct. 1313 (1995) 19
Holbrook v. Lykes Bros. S.S. Co., 80 F.3d 777 (3d Cir. 1996) 23
Hopkins v. Dow Corning Corp., 33 F.3d 1116 (9th Cir. 1994), *cert. denied*, 115 S. Ct. 734 (1995) 19
Knight v. Otis Elevator Co., 596 F.2d 84 (3d Cir. 1979) 19
McCullock v. H. B. Fuller Co., 61 F.3d 1038 (2d Cir. 1995) 21
O'Conner v. Commonwealth Edison Co., 13 F.3d 1090 (7th Cir.), *cert. denied*, 114 S. Ct. 2711 (1994) 20
Peitzmeier v. Hennessy Indus., Inc., 97 F.3d 293 (8th Cir. 1996) 25
Pestel v. Vermeer Mfg. Co., 64 F.3d 382 (8th Cir. 1995) 25
Rosen v. Ciba-Geigy Corp., 78 F.3d 316 (7th Cir.), *cert. denied*, 117 S. Ct. 73 (1996) 19
Thomas v. Newton Enters., 42 F.3d 1266 (9th Cir. 1994) 22

TABLE OF AUTHORITIES—Continued

Page

Trowbridge v. Abrasive Co., 190 F.2d 825 (3d Cir. 1951) 19
United States v. Alzanki, 54 F.3d 994 (1st Cir. 1995), *cert. denied*, 116 S. Ct. 909 (1996) 19
United States v. Davis, 40 F.3d 1069 (10th Cir. 1994), *cert. denied*, 115 S. Ct. 1806 (1995) 19
United States v. Muldrow, 19 F.3d 1332 (10th Cir.), *cert. denied*, 115 S. Ct. 175 (1994) 20
Vadala v. Teledyne Indus., 44 F.3d 36 (1st Cir. 1995) 21
Ventura v. Titan Sports, Inc., 65 F.3d 725 (8th Cir. 1995), *cert. denied*, 116 S. Ct. 1268 (1996) .. 19

Statutes, Rules And Regulations:

Fed. R. Evid. 104(a) 7, 8, 10
Fed. R. Evid. 702 ..... *passim*
Federal Motor Vehicle Safety Standard 216 1

Miscellaneous:

Standards and Procedures for Determining the Admissibility of Expert Evidence After Daubert, 157 F.R.D. 571 (1994) 14
Edward J. Imwinkelried, *The Next Step After Daubert: Developing A Similarly Epistemological Approach To Ensuring The Reliability Of NonScientific Expert Testimony*, 15 Cardozo L. Rev. 2271 (1994) 17

IN THE

Supreme Court of the United States

OCTOBER TERM, 1996

No. 96-645

SUBARU OF AMERICA, INC., and
FUJI HEAVY INDUSTRIES, INC.,
Petitioners,

v.

STEVEN D. COMPTON,
Respondent.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Tenth Circuit

BRIEF IN OPPOSITION

STATEMENT OF THE CASE

A. Steven Compton's Injury.

On February 19, 1988, Steven D. Compton was traveling as a passenger in a 1982 Subaru GL Station Wagon (hereinafter "Accident Vehicle") on U.S. Hwy. 83 near Scott City, Kansas. Compton was seated immediately behind the driver. The driver lost control of the vehicle, which left the roadway rolling over twice.[1] During the first roll of the vehicle, a portion of the roof and roof

[1] Petitioners erroneously state that the Accident Vehicle was travelling at 60 mph. Pet. 1. Both David Bilek, plaintiff's accident reconstruction expert and Kenneth Orlowski, defendant's expert, agreed that the Accident Vehicle rolled over at approximately 30 mph. Res. C.A. App. at 99, 243.

support structures [2] immediately above Compton collapsed inward violently compressing his head and neck downward. As a result of the collapse of the roof and support roof structures Compton suffered a spinal cord injury and was rendered a quadriplegic.

B. Larry Bihlmeyer's Qualifications.

1. Bihlmeyer's education.

At trial Compton presented the testimony of Larry Bihlmeyer as a design expert. Bihlmeyer earned a bachelor's degree in aerospace engineering from the University of Michigan and a masters degree in mechanical engineering from Wayne State University. During his university education he took courses in mechanical engineering dynamics, structural analysis, metallurgy, and other courses which involved basic engineering design concepts. Pet. C.A. App. at 256. Bihlmeyer is a member of the Society of Automotive Engineers, the American Society of Mechanical Engineers, and the American Society of Safety Engineers. *Id.* at 328-329.

2. Bihlmeyer's automotive work experience.

In October of 1972, Bihlmeyer began work as an automotive engineer at Ford Motor Company in the brake department. Bihlmeyer was involved in developing brakes on Ford trucks and pickups to meet federal braking standards. Pet. C.A. App. at 284.

Bihlmeyer then moved to Ford's wheel structures department. *Id.* at 286-288. Bihlmeyer worked on wheels, including determining what steel was used and how the

---

[2] Petitioners erroneously state that it is undisputed that Federal Motor Vehicle Safety Standard 216, 49 C.F.R. § 571.216, applied to the Subaru station wagon. There are no federal standards which specifically govern the strength of the C and D pillars on automobiles. The district court found that FMVSS 216 only applied to the A pillar, not the D pillar at issue in this case. Res. Supp. C.A. App. at 73-76; Pet. 12a.

wheels were welded. *Id.* at 287. At Ford, while working in the wheel program, Bihlmeyer participated in analysis of welding work including: correct welding form, testing welds, welding structure, weld failure analysis and how to determine bad welding from good welding from an engineering standpoint. *Id.* at 315.

Bihlmeyer then began work designing fuel systems at Ford. *Id.* at 288-294. Bihlmeyer was involved in crash testing, evaluating federal fuel system integrity standards and analyzing crush or intrusion on fuel tank systems in vehicle accidents. *Id.* at 289-292. Bihlmeyer worked as a design engineer in setting up fuel system tests. *Id.* 290-292. In designing fuel systems Bihlmeyer considered the crashworthiness of the vehicle and the potential for intrusion into the fuel system during a crash. *Id.* at 295-296.

In September of 1981, Bihlmeyer began work in vehicle engineering which utilizes engineering principles in examining the whole vehicle. *Id.* at 301. Part of Bihlmeyer's responsibilities included developing a Ranger Supercab pickup. *Id.* at 302. Part of this task involved the design, release and approval of production of the cab and roof structure of the Ranger Supercab. *Id.* at 303. As a design engineer, Bihlmeyer was involved in the development of the roof design of the Ranger Supercab. *Id.* at 303. Bihlmeyer was involved in the welding aspects of the Ranger Supercab model. Id. at 303. He was involved in examining the roof structure of the Ranger Supercab model in terms of strength of materials. *Id.* at 304-305. As part of the strength of materials for the roof structure, Bihlmeyer examined the welding pattern of the roof panel and its supporting system. *Id.* at 305. Bihlmeyer was one of the design engineers involved in determining the number of welds and location of welds necessary in developing the Ranger Supercab roof structure. *Id.* at 305-306.

After leaving Ford in 1987, Bihlmeyer began work as a consulting engineer. *Id.* at 309. Bihlmeyer has inspected hundreds of vehicles involved in rollover acci-

dents. *Id.* at 309. He has studied technical papers on injury causation from roof intrusion and roof collapse. *Id.* at 309. Bihlmeyer performed safety analysis including conformance of various parts of automobiles, trucks and pickups with federal, state or industry regulations. *Id.* at 325. Bihlmeyer has performed design analysis of the adequacy of the design of roof and roof support structures in rollover and roof-crush analyses of crashworthiness of vehicles. *Id.* at 325. He has performed several hundred analyses of roof and roof support structures. *Id.* at 325. Bihlmeyer has been involved in drop tests of various vehicles. *Id.* at 356.

3. *Bihlmeyer's engineering analysis of the Accident Vehicle.*

Bihlmeyer inspected the Accident Vehicle and an identical exemplar vehicle. Pet. C.A. App. at 335-337. He inspected the roof and roof support structures of both vehicles. *Id.* at 336. Bihlmeyer made notes, took measurements, photographs, and made drawings and diagrams of the welding pattern of the roof and roof support structures of the Accident Vehicle. *Id.* at 336-337. Bihlmeyer took measurements of the welds, distances between welds, and identified the locations of the welds on the Accident Vehicle. *Id.* at 337.

Bihlmeyer took measurements to determine the amount of headroom in the Accident Vehicle, both before and after the roof crush. *Id.* 429-430. He compared his measurements with the headroom in the hundreds of other vehicles he had examined and compiled a list of headroom measurements derived from a variety of sources. *Id.* 432-435.

Bihlmeyer measured the thickness of the left D pillar and determined it was .027 inches. *Id.* at 524-525. Bihlmeyer measured the thicknes of the right D pillar and determined it was .033 inches. *Id.* at 525. He identified

points of deformation involving the B, C, and D pillars.[3] *Id.* at 525-526. Bihlmeyer identified where the separate pieces that composed the side header[4] separated causing weakness. *Id.* at 526-527. Bihlmeyer identified where the bows were not welded to the roof panel. *Id.* at 527-528.

Bihlmeyer reviewed the depositions of Compton's experts David Bilek, a mechanical engineer and accident reconstructionist, and Anthony Sances, Ph.D., a biomedical expert who reviewed Compton's injuries. *Id.* at 337-338. Bihlmeyer reviewed the deposition testimony of Kenneth Orlowski, the engineer expert witness hired by Subaru/Fuji.[5] *Id.* at 338. He compiled various technical

---

[3] The roof support pillars of the Accident Vehicle and other vehicles are designated by letters. The front pillars on either side of the windshield are the "A" pillars, the pillars behind the front doors are the "B" pillars, the pillars behind the rear doors are the "C" pillars. In a station wagon the rear pillars are the "D" pillars. Pet. C.A. App. at 353.

[4] The header is a framework which helps to support the roof panel. The windshield header runs between the edge of the windshield and the roof panel. The side header runs from front to back along the edge of the roof on the side of the car. Pet. C.A. App. at 352.

[5] Kenneth Orlowski was employed by General Motors Corporation from 1965 to February 1988. He received his bachelor's degree in mechanical engineering from General Motors Institute in 1970. Res. Supp. C.A. App. at 222-231. He was a junior engineer/junior draftsman from 1965 through 1969. *Id.* at 248. From 1965 to 1988 he was never responsible for the design of a roof and roof support structures for any vehicle. *Id.* at 275-276. In 1971 he was transferred to the Engineering Analysis Department of engineering staff of General Motors, where he stayed until his retirement from General Motors in 1988: *Id.* at 221-235. Engineering Analysis is the engineering litigation support group at General Motors. Approximately 50 percent of Kenneth Orlowski's time was spent in direct involvement in product liability claims filed against General Motors. Kenneth Orlowski estimated that he testified on behalf of General Motors by deposition or at trial approximately 84 times prior to his retirement in 1988. *Id.* at 258-262. Upon his retirement, Kenneth Orlowski formed Safety Analysis Inc., a litigation engineering con-

papers and performed research on rollovers, welding and roof intrusion. *Id.* at 339-343.

4. *Bihlmeyer's design defect opinions.*

Bihlmeyer offered opinions concerning the design of the roof and roof support structures of the Accident Vehicle. The sheet metal of the D pillar was too thin and the lateral bow at the rear of the roof was too thin. Pet. C.A. App. at 490-496. The D pillar was not reinforced properly and the roof structure was not welded to the roof panel. *Id.* at 497, 500.

There were an insufficient number of welds where the D pillar attached to the rear header; an insufficient number of welds at the side header near the B pillar; and an insufficient number of welds at the top of the C pillar. *Id.* at 501. There were excessive cut outs in structural areas at the lower D pillar area, the rear header area, and, at the side header forward of the B pillar. *Id.* at 501. The weakest pillar in the roof support structure design was the D pillar. The D pillar's outer panel measured .027 inches, which is too thin to provide adequate support for the roof and roof support structure. *Id.* at 490.

Bihlmeyer demonstrated where the D pillar buckled and failed during the accident and stated that the buckling and crush could have been avoided by reinforcing and/or bracing the pillar. *Id.* at 490-492. Bihlmeyer demonstrated that the A, B and C pillars in the Accident Vehicle were designed with reinforcement features which provided additional strength and resistance to crush. The D pillar was not reinforced and was hollow at the point it attached to the roof. *Id.* at 498.

Excessive cut outs in stuctural areas existed in the lower left D pillar area, the rear header area and in the side

---

sulting firm. He currently devotes 100 percent of his time as a consulting engineering/expert witness for the automotive industry. *Id.* at 235-236, 267-268. He has testified by deposition or at trial an additional 66-72 times from 1988 to April 13, 1994. *Id.* at 267-270.

header forward of the B pillar. *Id.* at 501. Using demonstrative exhibits, Bihlmeyer illustrated how the left side header bent down during the accident and that the D pillar buckled down, pulling the top of the roof down with it over the left rear passenger compartment.

Using demonstrative exhibits, Bihlmeyer explained how the roof panel and rear bow were attached to the pillars and headers. He explained that where the header was welded together to form a V, there was a gap between the roof panel and the rear header indicating that there were no welds around the inner perimeter of all headers and that the headers were not welded to the roof panel. *Id.* at 508. A gap between the roof panel and the beam that supports the roof allows the roof to start to move following impact before the roof meets any internal resistance. This gap design can cause movement in the wrong direction, adding to the intrusion before the roof structure stops the movemet. *Id.* at 508-509.

From the C pillar to the D pillar there was a significant gap along the side header. There were no welds between the header and the inside edge of the header and the roof panel. *Id.* at 509. Because of the insufficient welds, the left side header and the rear header bowed and were pushed down by the roof. *Id.* at 509. There were no welds between the roof panel and the side header. There were no welds around the perimeter of the roof and the bows were not welded to the roof. *Id.* at 510. Bihlmeyer demonstrated that the side header was made of separate pieces which were attached together to form a long beam. However, the rear connection had separated and was pulled out and down because there were no welds across the end of the beam. *Id.* at 511.

C. The District Court's Rejection Of Petitioners' Challenges To Bihlmeyer's Testimony.

1. *Fed. R. Evid. 104(a) hearing.*

Bihlmeyer presented testimony concerning design defects in the Accident Vehicle. At trial, Bihlmeyer testi-

fied extensively in direct and cross-examination about his qualifications and experience as an engineer and design expert. Pet. C.A. App. at 253-415. The court then heard Subaru/Fuji's argument that Bihlmeyer was not qualified under Fed. R. Evid. 702 to testify. Pet. 21a-31a. The court held a hearing pursuant to Fed. R. Evid. 104(a) and considered Bihlmeyer's qualification and experience under Fed. R. Evid. 702. *Id.* The court also examined whether *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) applied to Bihlmeyer's testimony. After careful consideration, the court determined Bihlmeyer's testimony was not "scientific" knowledge as defined in *Daubert*. The district court stated.

> I don't think the Daubert case has a lot to do with the problem that I'm faced with. The Supreme Court says: Faced with a proffer of expert scientific testimony the trial judge must determine at the outset pursuant to Rule 104(a), whether the expert is proposing to testify to scientific knowledge that will assist the trier of fact to understand or determine a fact in issue. Then it goes on to say: This entails a preliminary assessment of whether the reasoning and methodology underlying the testimony is scientifically valid. I don't think we're dealing with that here. Really. But to the extent that you might say that we are, clearly there's some scientific knowledge involved in the testimony. . . . So to the extent the Daubert case is applicable, it's applicable.

Pet. 24a-25a.

2. *The district court's denial of Subaru/Fuji's motion for judgment as a matter of law.*

In denying Subaru/Fuji's motion, the district court stated:

> Bihlmeyer did not offer any "scientific" opinions. His opinions did not concern a complicated, experimental or esoteric topic at the cutting edge of science. Instead, Bihlmeyer's design defect opinions were of the

> "technical, or other specialized knowledge" variety; that is, they purportedly were engineering opinions derived from his training as an engineer and his experience working in the automotive industry . . . .

Pet. 17a.

The district court's determination that Bihlmeyer's testimony was not "scientific knowledge", is a factual finding based on the testimony presented by the expert witness, his qualifications and experience, and how those two intertwine to result in the proffered opinion. Bihlmeyer did not testify to "scientific knowledge" because he reached his conclusions based on his own expertise and experience, not the methods and procedures of science. Applying the *Daubert* factors, the trial court discussed *Daubert*'s concept of evidentiary reliability:

> Three of [the Daubert] factors have no logical application to Bihlmeyer's opinions. Factors such as rate of error, peer review and acceptance in a "relevant scientific discipline" have little, if any, bearing on mundane, 'professional witness' engineering testimony such as Bihlmeyer's.

Pet. 18a.

Thus, the district court applied the parameters of *Daubert* and determined it was not dealing with "scientific knowledge". The district court's factual finding that Bihlmeyer's testimony was not "scientific" and its application of the *Daubert* Part II-C factors was not an abuse of discretion.

D. The Tenth Circuit Affirmed The District Court's Factbound Determination, Concluding That The Court Did Not Abuse Its Discretion.

The Tenth Circuit, applying an abuse of discretion standard, affirmed the district court's admission of Bihlmeyer's testimony. Petitioners attempt to create an apparent legal issue out of that factbound determination by

mischaracterizing this Court's holding in *Daubert* and by misrepresenting the Tenth Circuit's holding in *Compton*.

The court of appeals determined that the district court initially and properly evaluated Bihlmeyer's testimony in a Rule 104(a) hearing and made the factual determination that Bihlmeyer was qualified to offer an opinion on the defective design of the Accident Vehicle. Pet. 3a. The Tenth Circuit then analyzed Bihlmeyer's testimony that the design and roof support structures in the Accident Vehicle were defective because they permitted excessive roof crush. Pet. 3a. The court made specific factual findings that Bihlmeyer "pinpointed areas of the roof structure where . . . additional support was required." Pet. 3a. The *Compton* court then evaluated Bihlmeyer's engineering analysis of the Accident Vehicle and determined that he "reached his expert conclusions by drawing upon general engineering principles and his twenty-two years of experience as an automotive engineer." Pet. 9a.

Opining that the district court may have erred by applying the *Daubert* factors to Bihlmeyer's testimony at all, the court nonetheless determined that the district court fulfilled its responsibilities of evaluating the relevance and reliability, see Pet. 8a, of Bihlmeyer's testimony under Rule 702. Pet. 9a. Noting that *Daubert* considered the admissibility of novel scientific evidence, the court of appeals determined that the *Daubert* factors did not apply to the evaluation of Bihlmeyer's testimony which was based "solely on experience or training." Pet. 8a. Citing post-*Daubert* Tenth Circuit cases which evaluated non-scientific expert testimony under the relevance and reliability requirements of Rule 702, see Pet. 8a, the court of appeals rejected the application of the *Daubert* factors to non-scientific expert testimony based on experience or training. Pet. 8a. After examining the record, the court of appeals concluded that the district

court "fulfilled its responsibility under Rule 702" and did not abuse its discretion in admitting Bihlmeyer's testimony. Pet. 10a.

REASONS FOR DENYING THE WRIT

I. THE TENTH CIRCUIT'S DECISION WAS CORRECT.

A. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*

1. *The only issue in* Daubert *was the validity of the* Frye *test.*

In *Daubert* the issue before the Court was whether the *Frye* [6] test was supplanted by the adoption of the Federal Rules of Evidence. *Daubert* examined whether results obtained from test tube, animal studies and reanalysis of previously conducted studies could be used to establish a link—contrary to previous studies—between the anti-nausea drug Bendectin, taken by women during pregnancy, and limb reduction birth defects in their fetuses. *Daubert,* 509 U.S. at 582. Presented with plaintiffs' novel scientific evidence establishing a link between the drug and plaintiffs' injuries this Court was asked to "determine the standard for admitting expert scientific testimony in a federal trial." *Daubert,* 509 U.S. at 582. Finding that the *Frye* test was superseded by the Federal Rules of Evidence, the Court recognized that Rule 702 itself provided the guidance for screening the admission of scientific expert testimony. *Id.* at 589.

2. Daubert *emphasized the "liberal thrust" of the Federal Rules of Evidence.*

Daubert noted the "liberal thrust" of the Federal Rules and their "general approach of relaxing the traditional barriers to 'opinion' testimony." *Daubert,* 509 U.S. at

---

[6] *Frye v. United States,* 54 App. D.C. 46, 47, 293 F. 1013, 1014 (1923).

588 (citations omitted). "The Rules were designed to depend primarily upon lawyer-adversaries and sensible triers of fact to evaluate conflicts." *Id.* at 589 (quoting Weinstein, *Rule 702 of the Federal Rules of Evidence is Sound; It Should Not Be Amended,* 138 F.R.D. 631, 631 (1991)).

Rule 702 confides to the trial judge the gatekeeping responsibility to "ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." *Daubert,* 509 U.S. at 589. "[W]e do not read the requirements of Rule 702 to apply specially or exclusively to unconventional evidence." *Id.* at 593 n.11. "[T]he Rules of Evidence—especially Rule 702—do assign to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." *Id.* at 597.

3. Daubert *only applies to scientific knowledge.*

Daubert's limitations are evident in the first sentence of the opinion which states: "[i]n this case we are called upon to determine the standard for admitting expert *scientific* testimony in a federal trial." *Id.* at 582 (emphasis added). *Daubert* reinforces its limitations by emphasizing, with italics, portions of Rule 702 in discussing how this rule replaced *Frye*: "[*i*]*f scientific,* technical, or other specialized *knowledge will assist the trier of fact* to understand the evidence or to determine a fact in issue" an expert "may testify *thereto.*" *Daubert,* 509 U.S. at 589. If this Court intended to craft a rule regarding all expert testimony, presumably it would not have emphasized only "scientific knowledge." In addition, *Daubert* extensively develops and defines what it means by "scientific knowledge." *Id.* at 592-595. After determining that Rule 702 requires expert testimony to be both relevant and reliable, *Daubert* explains what is contemplated by the language "scientific . . . knowledge" in Rule 702. *Id.* at 590. The

Court immediately drops a footnote explaining that while in this case the Court is discussing "scientific knowledge":

> Rule 702 also applies to 'technical, or other specialized knowledge.' Our discussion is limited to the scientific context because that is the nature of the expertise offered here.

Id. at 590 n.8. After clarifying in footnote 8 that the Court is now limiting its discussion to "scientific knowledge," *Daubert* goes on to offer some general guidelines for district courts to evaluate the evidentiary reliability of scientific expert testimony. *Id.* at 591.

In Part II-C of the opinion *Daubert* sets forth a list of non-exclusive factors that can be used to determine the evidentiary reliability of scientific expert testimony. *Id.* at 592-595. The Part II-C *Daubert* factors suggest that courts evaluate scientific expert testimony by examining whether the theory or technique under consideration: (1) can be or has been tested; (2) has been subject to peer review and publication; (3) has a known rate of error; and (4) is generally accepted in that field. *Id.* at 593-95.

Clearly, the language in *Daubert* stating that all expert testimony admitted under Rule 702 must be both relevant and reliable applies to all expert testimony. However, the specific factors developed by the Court in Part II-C of the opinion are limited to the evaluation of scientific expert testimony of the type presented in *Daubert*. *Id.* at 590 n.8.[7]

---

[7] Justice Blackmun's "general observations" about the factors that a federal judge ought to consider in evaluating the soundness of scientific methodology, set forth in part II-C of his opinion, are specifically aimed at the evaluation of scientific testimony. Of course, some of these factors may be highly relevant to an evaluation of certain types of nonscientific expert evidence. For example, whether the proffered methodology can be and has been tested may very well be pertinent to an examination of nonscientific but "technical" expert evidence. Peer review and publication may be an important factor with respect

4. *Under* Daubert, *cross-examination, presentation of contrary evidence and proper jury instructions are the generally recognized methods for challenging expert testimony.*

Expressing confidence in the capability of juries and the adversary system, the Court rejected Petitioners' concerns in *Daubert* that abolition of the *Frye* test would lead to presentation of absurd and irrational pseudoscientific assertions. "Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." *Daubert*, 509 U.S. at 596 (citation omitted). The Court also recognized that the district court remains free to direct a judgment under Rule 50(a), if insufficient evidence is present "to allow a reasonable juror to conclude that the position more likely than not is true." *Id.* at 596. "These conventional devices, rather than wholesale exclusion under an uncompromising 'general acceptance' test, are the appropriate safeguards where the basis of scientific testimony meets the standards of Rule 702." *Id.*

This Court in *Daubert* rejected the rigid, restrictive approach to the admission of expert opinion testimony urged by Petitioners in this case as being contrary to the Federal Rules. Petitioners' arguments that Part II-C of *Daubert* **must** be satisfied before *any* expert testimony is admitted under Rule 702 is in conflict with the liberal thrust of the Rules in allowing expert opinion testimony.

---

to testimony involving the social sciences. And the "general acceptance" of a methodology within a particular discipline will be crucial in many cases. The point is that any one of Justice Blackmun's four factors may or may not have applicability to proffers of nonscientific expert evidence.

Standards and Procedures for Determining the Admissibility of Expert Evidence After Daubert, 157 F.R.D. 571, 579 (1994) (footnote omitted).

B. The Tenth Circuit's Decision Is Consistent With *Daubert*.

Compton requires district courts in the Tenth Circuit to evaluate expert testimony, such as Bihlmeyer's, under Rule 702 and to ensure that the testimony is both relevant and reliable. Petitioners assert that:

> The Tenth Circuit held that *Daubert* is completely inapplicable in [Bihlmeyer's] situation, and that a trial judge accordingly has no duty under Rule 702 of the Federal Rules of Evidence to evaluate the reliability of such expert testimony, even if the expert fails to rely on any principle or methodology of engineering science.

Pet. 9. That statement is simply not accurate.

In concluding that the district court did not abuse its discretion in admitting Bihlmeyer's expert testimony, the court of appeals set forth the standard for the admissibility of expert testimony under the Federal Rules of Evidence. Prior to *Daubert*, the court of appeals recognized that "the 'touchstone' of admissibility [under Rule 702] is helpfulness to the trier of fact." Pet. 6a (citations omitted). Rule 702 requires that "a logical basis [must] exist for an expert's opinion . . . the weaknesses in the underpinnings of the opinion[] go to the weight and not the admissibility of the testimony." Pet. 6a (citations omitted). The traditional Rule 702 analysis "requires the trial court to make a preliminary finding that proffered expert testimony is **both relevant and reliable** while taking into account '[t]he inquiry envisioned by Rule 702 is . . . a flexible one.' " Pet. 8a (emphasis added).

Recognizing that *Daubert* "now mandates a further Rule 702 inquiry", the court of appeals acknowledged that the factors outlined by *Daubert* in Part II-C of the opinion—of whether the theory or technique has been tested; subject to peer review or publication; is generally accepted within the scientific community; or has a known

rate of error—are useful factors for evaluating evidentiary reliability of the methods and procedures of novel scientific evidence. Pet. 7a.

The court of appeals determined that in the absence of scientific testimony presenting some novel principle or methodology, use of the Part II-C *Daubert* factors is unwarranted. Pet. 8a. After *Daubert*, the Tenth Circuit has continued to follow its traditional Rule 702 analysis —that expert testimony must be both relevant and reliable—"except in cases involving unique, untested, or controversial methodologies or techniques" in which case the additional factors developed in *Daubert* apply. Pet. 8a.

The Tenth Circuit concluded that the district court applied Rule 702 but opined that the factors in Part II-C of *Daubert* which this Court developed to evaluate the evidentiary reliability of certain scientific studies, were not applicable to evaluate the evidentiary reliability of Bihlmeyer's engineering testimony. Most importantly, however, and the point Petitioners would have this Court ignore, is that putting the *Daubert* Part II-C factors aside, the court of appeals held that the district court correctly determined Bihlmeyer's testimony met the Rule 702 criteria of relevance and reliability and the district court did not abuse its discretion in admitting his testimony.[8]

Petitioners argue that the court of appeals decision "creates a huge loophole by means of which the 'gatekeeper' obligations imposed on trial judges by Rule 702 can be easily circumvented." Pet. 9. Contrary to this assertion, *Compton* states that district courts are required to evaluate expert testimony, such as Bihlmeyer's, under Rule 702. Pet. 8a. The *Compton* court further clarifies and emphasizes the district courts' Rule 702 duties by declaring that expert testimony must be **both relevant and**

---

[8] Petitioners do not challenge the relevance of Bihlmeyer's testimony. Pet. 15a.

reliable. Pet. 8a (emphasis added). Neither the Federal Rules of Evidence nor *Daubert* impose additional obligations on the district courts in this context.

Petitioners argue that the *Daubert* factors of testing, peer review, rate of error and general acceptance should apply to all scientific, technical and other specialized expertise. Pet. 12. This broad reading of *Daubert* beyond its intended scope produces ridiculous results. Much of Bihlmeyer's knowledge is based on scientific principles (force, dynamics, strength analysis, strength of materials), however, his conclusions are not derived by the scientific method as defined in *Daubert*, 509 U.S. at 590.

The rationale supporting *Daubert*'s reliance on the scientific method to evaluate evidentiary reliability is grounded in the testability of scientific knowledge. If a molecular biologist testifies that two blood samples have identical DNA strands, it is possible for a second biologist to test the same samples and methods used in the first analysis and then compare results. Edward J. Imwinkelreid, *The Next Step After Daubert: Developing A Similarly Epistemological Approach To Ensuring The Reliability Of Nonscientific Expert Testimony*, 15 Cardozo L. Rev. 2271, 2284 (1994). However, if the opinion of a farmer is offered on the proper design for shoring an irrigation ditch, a second farmer cannot replicate the first farmer's relevant experience or define a margin of error in the first farmer's methodology. *Id.* The *Daubert* factors do not make sense in evaluating an expert's methods and procedures which are based on his or her experience in a technical field. With technical expertise such as Bihlmeyer's the scientific method is not applicable.

II. PETITIONERS ARE CHALLENGING THE DISTRICT COURT'S FACTBOUND APPLICATION OF SETTLED LAW WHICH IS REVIEWABLE ONLY FOR AN ABUSE OF DISCRETION.

Unsuccessful in attacking Bihlmeyer's credibility at trial, unsuccessful in persuading the jury through their own

expert witness, and unsuccessful in challenging the substance of Bihlmeyer's testimony on appeal, Petitioners again challenge Bihlmeyer's credibility before this Court. Rule 702 establishes a threshold requirement for the admission of expert testimony. Once the court determines that the Rule 702 requirements have been met, "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof" are the "traditional and appropriate means of attacking shaky but admissible evidence." *Daubert*, 509 U.S. at 596.

The restrictive, rigid standard Petitioners urge would present plaintiffs with an impossible burden. Petitioners attack Bihlmeyer's testimony because he has never fully designed a roof or roof support structure.[9] Petitioners essentially argue that no expert except one who has decades of experience designing Subaru station wagon roofs would be qualified to testify in this case as an expert. That contention is insupportable as either a practical or logical matter. Plaintiffs simply will not have access to the number of automotive design engineers available to major automobile corporations:[10]

> If we were to declare as a rule of law that one must actually have practical experience in a given industry in order to qualify as an expert in litigation involving its products, we might very well place an onerous burden on plaintiffs in some cases. Where the industry is small and tightly knit, it may be very difficult for the plaintiff to obtain the services of an expert currently employed therein, and it might be equally difficult to find someone who was formerly employed

---

[9] Not surprisingly, Kenneth Orlowski, Petitioners' own expert witness, with 23 years of experience with General Motors had never designed a vehicle roof or roof support structure either. Res. Supp. C.A. App. at 251-256, 275-276.

[10] Despite involvement in approximately 100 cases, Petitioners' expert Kenneth Orlowski has never testified against an automobile manufacturer for a plaintiff. Res. Supp. C.A. App. at 267-270.

> in the industry. But the key experts of an industry would normally be available to the defendant.

Knight v. Otis Elevator Co., 596 F.2d 84, 88 (3d Cir. 1979) (quoting *Trowbridge v. Abrasive Co.*, 190 F.2d 825, 829 n.9 (3d Cir. 1951)).

Bihlmeyer has a bachelor's degree in aerospace engineering, a masters degree in mechanical engineering, is a member of the Society of Automotive Engineers, the American Society of Mechanical Engineers, and the American Society of Safety Engineers. In addition to other engineering employment, Bihlmeyer worked as an automotive engineer at the Ford Motor Company for fifteen years, in the brake department, wheel structures department, fuel systems design, and vehicle engineering, which included the development of the roof design of the Ranger Supercab. Bihlmeyer's qualifications to render an engineering opinion on the design of the Subaru roof structure coupled with his training and experience, as well as his detailed and thorough engineering analysis of the Accident Vehicle, more than adequately establish the reliability of his design opinions in this case.

This Court has recognized the fundamentally discretionary nature of Rule 702 determinations and has repeatedly declined to review post-*Daubert* challenges to the lower federal courts' decisions regarding the admissibility of expert testimony in specific cases, including as recently as this Term. *See, e.g., Rosen v. Ciba-Geigy Corp.*, 78 F.3d 316 (7th Cir.), *cert. denied*, 117 S. Ct. 73 (1996).[11]

---

[11] *See also Ventura v. Titan Sports, Inc.*, 65 F.3d 725 (8th Cir. 1995), *cert. denied*, 116 S. Ct. 1268 (1996); *United States v. Alzanki*, 54 F.3d 994 (1st Cir. 1995), *cert. denied*, 116 S. Ct. 909 (1996); *Carroll v. Litton System, Inc.*, 47 F.3d 1164 (4th Cir.), *cert. denied*, 116 S. Ct. 70 (1995); *Daubert v. Merrell Dow Pharmacueticals, Inc.*, 43 F.3d 1311 (9th Cir.), *cert. denied*, 116 S. Ct. 189 (1995); *United States v. Davis*, 40 F.3d 1069 (10th Cir. 1994), *cert. denied*, 115 S. Ct. 1806 (1995); *Habecker v. Clark Equip. Co.*, 36 F.3d 278 (3d Cir. 1994), *cert. denied*, 115 S. Ct. 1313 (1995); *Hopkins v. Dow Corning Corp.*, 33 F.3d 1116 (9th Cir. 1994), *cert.*

III. PLENARY REVIEW BY THIS COURT WOULD NOT ALTER THE OUTCOME IN THIS CASE, BECAUSE THE DISTRICT COURT APPLIED THE *DAUBERT* FACTORS.

The district court applied *Daubert* but concluded that most of the *Daubert* factors did not support the exclusion of Bihlmeyer's testimony. Pet. 18a. "[T]he court concludes that to the extent *Daubert* is applicable to Bihlmeyer's opinions, the *Daubert* requirements are satisfied." Pet. 19a.

Daubert offered "general observations" on factors to be considered in analyzing scientific knowledge. *Daubert*, 509 U.S. at 593. The factors developed in *Daubert* are not the only factors, nor do they all have to be met before testimony will be admitted. *Daubert* emphasized that the inquiry under Rule 702 is "a flexible one." *Id.* at 594. *Daubert* teaches "[m]any factors will bear on the inquiry, and we do not presume to set out a definitive checklist or test." *Id.* at 593. "Its overarching subject is the scientific validity . . . of the principles that underlie a proposed submission. The focus, of course, must be solely on the principles and methodology, not on the conclusion that they generate." *Id.* at 594-95.

For technical and other specialized knowledge, it is clear the four factors of Part II-C do not apply and to the extent other guidance in *Daubert* applies to Bihlmeyer's testimony it was satisfied. Thus, even were the Court to disagree with the Tenth Circuit's conclusion that the *Daubert* factors were inapplicable here, this Court would then have to determine that the district court's application of those factors constituted an abuse of discretion before the outcome of this case would be affected.

---

denied, 115 S. Ct. 734 (1995); *Berry v. City of Detroit*, 25 F.3d 1342 (6th Cir. 1994), *cert. denied*, 115 S. Ct. 902 (1995); *United States v. Muldrow*, 19 F.3d 1332 (10th Cir.), *cert. denied*, 115 S. Ct. 175 (1994); *O'Conner v. Commonwealth Edison Co.*, 13 F.3d 1090 (7th Cir.), *cert. denied*, 114 S. Ct. 2711 (1994).

IV. THERE IS NO CONFLICT OF AUTHORITY IN THE CIRCUITS ON THE FACTBOUND ISSUE PRESENTED IN THIS CASE.

Most circuits to consider the application of *Daubert* to nonscientific evidence have expressly agreed with the Tenth Circuit. For example in *Vadala v. Teledyne Indus.*, 44 F.3d 36 (1st Cir. 1995), a product liability action arising from an airplane crash, the district court excluded plaintiff's expert engineering testimony. Rejecting plaintiff's assertion that exclusion of the testimony conflicted with language in *Daubert* stating that a scientific principal may sometimes be the basis for expert testimony even if it is not "generally accepted" the First Circuit stated:

> *Daubert's* holding . . . has nothing to do with this case, in which the dispute concerns an event rather than a scientific law. More pertinent is *Daubert's* countervailing precept: that the trial judge is assigned "the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand."

Id. at 39.

In *McCullock v. H.B. Fuller Co.*, 61 F.3d 1038 (2d Cir. 1995), plaintiff McCullock, after working in a bookbinding factory near a hot glue pot that had inadequate ventilation, developed throat injuries. *Id.* at 1041. McCullock brought a successful product liability action against Fuller, the manufacturer of the glue melting pot. Fuller appealed, alleging McCullock's expert testimony on whether McCullock was in the "breathing zone" of the glue fumes did not meet the *Daubert* requirements. *Id.* at 1042.

Affirming the district court's admission of the expert's engineering testimony without applying the *Daubert* Part II-C factors developed for novel scientific evidence, the Second Circuit stated:

> We find that [the expert's] testimony easily qualifies for admission under *Daubert*. Fuller's argument

> ignores [the expert's] extensive practical experience. [The expert's] background and practical experience qualify as "specialized knowledge" gained through "experience, training, or education," Fed.R.Evid. 702, and his testimony was properly admitted.
>
> . . .
>
> Fuller's *Daubert* contention that [the expert's] testimony lacked any grounding in science, and that he merely stated an obvious concept that any layman knows, is meritless. [The expert] based his opinion on the following factors grounded in academic and practical experience: examination of various materials and educational sources on safety regarding the ventilation of an HC binder; review of Fuller's MSDS; interviews with McCullock concerning her work area and the glue pot; background industrial experience with ventilation; and practical experience with fumes. . . .
>
> [The expert] had both the practical experience and necessary academic training to testify whether McCullock was in the breathing zone of the glue fumes. *Id.* at 1043.

Other circuits have also considered the admission of expert testimony without reference to the *Daubert* Part II-C factors developed for assessing the evidentiary reliability of novel scientific testimony. The Ninth, Third and Fifth Circuits have evaluated the relevance and reliability of the expert testimony by focusing on the language of Rule 702 which states:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

In *Thomas v. Newton Enters.*, 42 F.3d 1266 (9th Cir. 1944), plaintiff was injured falling through an unguarded hatch opening located beneath the termination point of a

ladder. Plaintiff presented expert testimony from a longshore worker with 29 years experience in the shipping industry that the hatch opening was negligently located causing plaintiff injury. *Id.* at 1269. The district court excluded the expert testimony and granted defendant summary judgment.

The Ninth Circuit reversed, holding that:

> *Daubert* was clearly confined to the evaluation of scientific expert testimony. Special concerns arise when evaluating the proffer of scientific testimony that do not arise when evaluating the type of expert testimony offered here. [Plaintiff's expert] conclusions were based on his 29 years of extensive experience on the water front. While a scientific conclusion must be linked in some fashion to the scientific method . . ., [plaintiff's expert's] non-scientific testimony need only be linked to some body of specialized knowledge or skills. *Id.* at 1270 n.3.

In *Holbrook v. Lykes Bros. S.S. Co.*, 80 F.3d 777 (3d Cir. 1996), an asbestos products liability case, the district court admitted defendant's expert testimony that radiation exposure in the 1960's was the cause of plaintiff's cancer rather than exposure to the defendant's asbestos. *Id.* at 784. Affirming the district court, the Third Circuit stated:

> [The experts'] backgrounds in the study of mesothelioma and its causes, including radiation, their review of the literature and their review of John Holbrook's history provided substance upon which they could offer scientific opinions that met the required threshold of reliability.

Id. at 785. The Court evaluated the expert's testimony pursuant to *Daubert*, to ensure that it was relevant and reliable, *id.* at 784, without using the *Daubert* factors in Part II-C of testing, peer review and rate of error.

In *Carroll v. Morgan*, 17 F.3d 787, 789 (5th Cir. 1994), a medical negligence case, plaintiff challenged

defendant's physician expert testimony on standard of care under *Daubert* claiming that the expert did not base his testimony on "a well-founded methodology" or on "generally accepted principles within the medical profession." Affirming the district court's admission of the expert testimony under *Daubert*, the Fifth Circuit held that the expert did not present any "objectionable or unconventional scientific theory or methodology" but, rather based his testimony on thirty years of experience as a practicing, board-certified cardiologist and on his review of medical records. *Id.* at 789-90. The Court found that this "ground[ed] [his testimony] in the methods and procedures of science" and found it was not mere "unsupported" speculation. *Id.* at 790.

The cases on which petitioners rely to establish a conflict between the circuits are either distinguishable or reconcilable as depending on the facts and involving the application of an abuse of discretion standard of review to the district courts' determinations to exclude particular expert testimony.

For instance, in *Cummins v. Lyle Indus.*, 93 F.3d 362 (7th Cir. 1996), the plaintiff was injured by a trim press machine. The district court excluded plaintiff's expert engineering testimony on the defective design of the press. The Seventh Circuit, applying an abuse of discretion standard, affirmed the exclusion of the engineer's testimony on the feasibility of alternative designs for the machine and on the adequacy of the warnings. *Id.* at 371. Significant in the court's opinion was the fact the engineer had not tested his alternative design. *Id.* at 368.[12]

In *Deimer v. Cincinnati Sub-Zero Products, Inc.*, 58 F.3d 341, 342-43 (7th Cir. 1995), the plaintiff was in-

---

[12] In *Compton*, the district court rejected Petitioners' argument that a lack of testing rendered Bihlmeyer's testimony inadmissible, finding "there was no testimony that testing is an essential element in the methodology of development of engineering opinions such as those given by Bihlmeyer." Pet. 18a.

jured when the power cord on a hypothermia machine detached and caused her to fall, bringing the machine down on top of her. The district court excluded Deimer's expert testimony on the defective design of the cord and granted defendant judgment as a matter of law. *Id.* at 343. In excluding the testimony, the district court made several findings concerning the reliability of Deimer's expert's methods and procedures. *Id.* at 345. Finding the district court did not abuse its discretion, the Seventh Circuit affirmed. *Id.*

Similarly, in *Pestel v. Vermeer Mfg. Co.*, 64 F.3d 382 (8th Cir. 1995), the district court excluded expert engineering testimony on the defective nature of a stump-cutting machine, using the factors developed in Part II-C of *Daubert*. In a cursory two page opinion, the Eighth Circuit affirmed, holding that the district court did not abuse its discretion in excluding the expert's testimony. *Id.* at 384-85. Whether the expert in *Pestel* claimed to rely on his training and experience with stump-cutting machines or on some other methodology to evaluate the product is unclear from the factual record in the opinion. *See Anderson v. F.J. Little Machine Co.*, 68 F.3d 1113, 1116 (8th Cir. 1993) (*Pestel* did not exclude expert testimony concerning safety guards as a matter of law, but recognized that the trial court did not abuse its discretion in excluding the testimony). Finally, in *Peitzmeier v. Hennessy Indus., Inc.*, 97 F.3d 293 (8th Cir. 1996), the Eighth Circuit also applied the *Daubert* Part II-C factors to proffered expert engineering testimony on the defective design of a tire changing machine, *id.* at 298, and concluded that the district court did not abuse its discretion in excluding such testimony. *Id.*

Petitioners assert that the experts in *Cummins, Deimer Pestel,* and *Peitzmeier* would avoid judicial scrutiny under the Tenth Circuit's decision in *Compton*. That is simply incorrect. The Tenth Circuit held that all expert testimony must be both relevant and reliable. Pet. 8a. These

are the protections required by Rule 702 and are the standards by which the Tenth Circuit would scrutinize the testimony in cases involving expert engineering testimony.

CONCLUSION

The questions presented in the petition are without merit and do not warrant plenary review. The Tenth Circuit's decision is not in conflict with *Daubert* or any other precedent of this Court. Indeed, the Tenth Circuit's opinion is completely consistent with the requirements of Fed. R. Evid. 702. Therefore, Respondent respectfully requests that the petition be denied.

Respectfully submitted,

LYNN R. JOHNSON
Counsel of Record
STEPHEN N. SIX
PATRICK A. HAMILTON
SHAMBERG, JOHNSON & BERGMAN, CHTD.
4551 W. 107th St., Ste. 355
Overland Park, KS 66207
(913) 642-0600

STEPHEN R. MCALLISTER
University of Kansas
School of Law
Green Hall
Lawrence, KS 66045
(913) 864-4550

November 1996

No. 96-645

Supreme Court, U.S.
FILED
NOV 22 1996
CLERK

IN THE
Supreme Court of the United States
OCTOBER TERM, 1996

SUBARU OF AMERICA, INC., and
FUJI HEAVY INDUSTRIES, INC.,
Petitioners,

v.

STEVEN D. COMPTON,
Respondent.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Tenth Circuit

BRIEF FOR THE CHEMICAL MANUFACTURERS ASSOCIATION AND THE CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA AS *AMICI CURIAE* IN SUPPORT OF PETITIONERS

Of Counsel:
DAVID F. ZOLL
DONALD D. EVANS
CHEMICAL MANUFACTURERS ASSOCIATION
1300 Wilson Boulevard
Arlington, Virginia 22209
(703) 741-5000

ROBIN S. CONRAD
NATIONAL CHAMBER LITIGATION CENTER, INC.
1615 H Street, N.W.
Washington, D.C. 20062
(202) 463-5337

November 22, 1996

BERT BLACK *
DANIEL R. CHEMERS
WEINBERG & GREEN LLC
100 South Charles Street
Baltimore, Maryland 21201
(410) 332-8600

CLIFTON T. HUTCHINSON
HUGHES & LUCE, L.L.P.
1717 Main Street
Suite 2800
Dallas, Texas 75201
(214) 939-5500
Counsel for Amici Curiae

* Counsel of Record

WILSON - EPES PRINTING CO., INC. - 789-0096 - WASHINGTON, D.C. 20001

84 pp

QUESTIONS PRESENTED

1. Whether the explanation of Rule 702 of the Federal Rules of Evidence set forth in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), applies to the testimony of an engineering expert.

2. If *Daubert* applies to an engineering expert's testimony, whether such testimony is admissible if the expert purports to base his or her conclusion solely on experience and training, and not on scientific or engineering methodology and reasoning.

TABLE OF CONTENTS

	Page
QUESTIONS PRESENTED	i
TABLE OF AUTHORITIES	v
INTEREST OF *AMICI CURIAE*	1
STATEMENT OF THE CASE	3
SUMMARY OF ARGUMENT	4
ARGUMENT	6
I. THE TENTH CIRCUIT HAS CREATED A SPLIT IN THE CIRCUITS BY HOLDING *DAUBERT*'S GUIDANCE INAPPLICABLE TO THE ENGINEERING TESTIMONY IN THIS CASE	6
A. Because Engineering Is Rooted in Scientific Knowledge, *Daubert*'s Criteria for Evaluating Scientific Validity Generally Govern the Admissibility of Expert Engineering Testimony	6
B. Even if Viewed as "Technical" Rather Than "Scientific" Knowledge, Engineering Is Covered by *Daubert*'s Guiding Principle that Expert Testimony Must Validly Derive from the Expert's Field	7
C. The Tenth Circuit's Ruling That an Engineer Can Escape Judicial Gatekeeping Is at Odds with *Daubert* and Conflicts with Holdings from Other Circuits	9
II. THE TENTH CIRCUIT'S "EXPERIENCE AND TRAINING" TEST FOR DETERMINING THE ADMISSIBILITY OF EXPERT TESTIMONY IS CONTRARY TO *DAUBERT*, AND IS PARTICULARLY INAPPROPRIATE FOR ENGINEERING TESTIMONY	11

TABLE OF CONTENTS—Continued

Page

A. The "Experience and Training" Test Would Eviscerate *Daubert*, and It Conflicts with Decisions from Other Circuits 11

B. Requiring an Explanation of Reasoning and Methodology Is Particularly Important for a Field Like Engineering 14

C. Engineering Standards Are Based on Careful Testing and Considered Review of Data, Not on a Single Engineer's Experience and Training 15

III. THE ISSUES IN THIS CASE ARE IMPORTANT 16

CONCLUSION 17

TABLE OF AUTHORITIES

Cases:	Page
Asplundh Manufacturing Division v. Benton Harbor Engineering, 57 F.3d 1190 (3d Cir. 1995)	10
Berry v. City of Detroit, 25 F.3d 1342 (6th Cir. 1994), *cert. denied*, 115 S.Ct. 902 (1995)	9, 12
Brown v. Miska, 1995 WL 723156 (S.D. Tex. July 19, 1995) (unpublished)	6
Brown v. Miska, 96 F.3d 1445 (5th Cir. Aug. 29, 1996) (Table No. 95-40758)	7
Compton v. Subaru of America, Inc., 82 F.3d 1513 (10th Cir. 1996)	4
Cummins v. Lyle Industries, 93 F.3d 362 (7th Cir. 1996)	10, 14
Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993)	*passim*
Deimer v. Cincinnati Sub-Zero Products, Inc., 58 F.3d 341 (7th Cir. 1995)	14
Frymire-Brinati v. KPMG Peat Marwick, 2 F.3d 183 (7th Cir. 1993)	9
Habecker v. Clark Equipment Co., 36 F.3d 278 (3d Cir. 1994), *cert. denied*, 115 S.Ct. 1313 (1995)	10
Iacobelli Construction, Inc. v. County of Monroe, 32 F.3d 19 (2d Cir. 1994)	10
Liriano v. Hobart Corp., 1996 WL 304337 (S.D.N.Y. July 23, 1996)	16
Marcel v. Placid Oil Co., 11 F.3d 563 (5th Cir. 1994)	10
Peitzmeier v. Hennessy Industries, Inc., 97 F.3d 293 (8th Cir. 1996)	10, 14
Pestel v. Vermeer Manufacturing Co., 64 F.3d 382 (8th Cir. 1995)	10
Pries v. Honda Motor Co., Ltd., 31 F.3d 543 (7th Cir. 1994)	10
Rosen v. Ciba-Geigy Corp., 78 F.3d 316 (7th Cir.), *cert. denied*, 117 S.Ct. 73 (1996)	13
Rutigliano v. Valley Business Forms, 929 F.Supp. 779 (D. N.J. 1996)	13
Sepulveda v. Department of Health and Human Services, 1995 WL 502887 (Fed. Cl. Aug. 10, 1995)	13

TABLE OF AUTHORITIES—Continued

	Page
Thomas v. Newton International Enterprises, 42 F.3d 1266 (9th Cir. 1994)	14
United States v. Locascio, 6 F.3d 924 (2d Cir. 1993), *cert. denied*, 114 S.Ct. 1646 (1994)	14
Ventura v. Titan Sports, Inc., 65 F.3d 725 (8th Cir. 1995), *cert. denied*, 116 S.Ct. 1268 (1996)	10
Waitek v. Dalkon Shield Claimants Trusts, 934 F. Supp. 1068 (N.D. Iowa 1996)	16
Rules:	
Federal Rules of Evidence, Rule 701	10
Rule 702	*passim*
Miscellaneous:	
Lisa M. Agrimonti, Note, *The Limitations of* Daubert *and Its Misapplication to Quasi-Scientific Experts, A Two-Year Case Review of* Daubert v. Merrell Dow Pharmaceuticals, Inc., 35 Washburn L.J. 134 (1995)	8
American College of Trial Lawyers, *Standards and Procedures for Determining the Admissibility of Expert Evidence After* Daubert, 157 F.R.D. 571 (1994)	8
George C. Beakley & Ernest G. Chilton, DESIGN: SERVING THE NEEDS OF MAN (1974)	15
Margaret A. Berger, *Evidentiary Framework, in* REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 37 (Federal Judicial Center 1994)	8
Bert Black, Francisco J. Ayala & Carol Saffran-Brinks, *Science and the Law in the Wake of* Daubert: *A New Search for Scientific Knowledge*, 72 Tex. L. Rev. 715 (1994)	16
David L. Faigman, *Mapping the Labyrinth of Scientific Evidence*, 46 Hastings L. J. 555 (1995)	8
G. Michael Fenner, *The* Daubert *Handbook: The Case, Its Essential Dilemma, and Its Progeny*, 29 Creighton L. Rev. 939 (1996)	8

TABLE OF AUTHORITIES—Continued

Page

Edward J. Imwinkelried, *The Next Step After* Daubert: *Developing a Similarly Epistemological Approach to Ensuring the Reliability of Non-scientific Expert Testimony*, 15 Cardozo L. Rev. 2771 (1994) 8

Marc S. Klein, *The Revolution in Practice and Procedure: "*Daubert *Hearings"*, 1 Shepard's Expert & Sci. Evidence Q. 655 (1994) 16

Arvin Maskin, *The Impact of* Daubert *on the Admissibility of Scientific Evidence: The Supreme Court Catches Up with a Decade of Jurisprudence*, 15 Cardozo L. Rev. 1929 (1994) 16

Linda Sandstrom Simard & William G. Young, Daubert*'s Gatekeeper: The Role of the District Judge in Admitting Expert Testimony*, 68 Tul. L. Rev. 1457 (1994) 9

ANNUAL BOOK OF ASTM STANDARDS, Vol. 00.01 (1992) 15

WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY (1986) 6

6 THE WORLD BOOK ENCYCLOPEDIA (1996) 6

IN THE

Supreme Court of the United States

OCTOBER TERM, 1996

No. 96-645

SUBARU OF AMERICA, INC., and
FUJI HEAVY INDUSTRIES, INC.,
Petitioners,

v.

STEVEN D. COMPTON,
Respondent.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Tenth Circuit

---

BRIEF FOR THE CHEMICAL MANUFACTURERS ASSOCIATION AND THE CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA AS *AMICI CURIAE* IN SUPPORT OF PETITIONERS

Amici curiae respectfully pray that this Court grant review in this case. *Amici* have obtained consent from all parties to file this brief. Correspondence evidencing consent has been provided to the Clerk of this Court.

INTEREST OF *AMICI CURIAE*

The Chemical Manufacturers Association ("CMA") is a non-profit trade organization whose member companies produce, market, and use industrial chemicals. Its members comprise more than 90 percent of the productive

capacity for basic industrial chemicals in the United States. The chemical industry employs over a million workers in this country, and produces about 1.8 percent of the U.S. gross domestic product. On a value-added basis, it is about 10.3 percent of U.S. manufacturing.

The Chamber of Commerce of the United States of America (the "Chamber") is the largest federation of business, trade and professional organizations in the United States. The Chamber represents more than 215,000 companies, as well as several thousand trade and professional organizations, and state and local chambers of commerce. Over 90 percent of the member companies employ 100 or fewer people. For these small businesses, having to defend even false and unsupported claims can threaten their very existence.

Amici are concerned about the Tenth Circuit's decision in this seemingly ordinary automobile accident case because it announces a new standard for admitting expert testimony that undermines this Court's ruling in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). Under *Daubert*, federal trial judges must act as gatekeepers to determine "whether the reasoning or methodology underlying [an expert's] testimony is scientifically valid and . . . whether that reasoning or methodology properly can be applied to the facts in issue." *Id.* at 592-93.

Daubert has greatly improved the use of expert evidence in federal courts by focusing attention on whether experts can provide reasoned explanations of how they reach their conclusions. The Tenth Circuit, however, would allow experts to escape judicial gatekeeping simply by saying that they relied on their training and experience and did not engage in any definable reasoning process. For *amici* and their constituent members, who face putative expert testimony from many fields and in many different kinds of cases, this interpretation of *Daubert* raises grave concerns.

When experts are allowed to give opinions in court that are not based on the methods and principles of their field of expertise, defendants sometimes pay for injuries or damages they did not cause. The American consumer also pays; prices go up and some products are never developed or never brought to market. *Daubert* has reduced these problems significantly, and this case should not be allowed to vitiate its salutary effect.

STATEMENT OF THE CASE

At one level this case is about an automobile accident and an engineering expert witness who fashioned a unique design standard for passenger car roofs without explaining his methodology or his reasoning. Its importance, however, goes far beyond automobiles and engineering. The Tenth Circuit's holding that the admissibility of this expert testimony was not governed by *Daubert* raises serious questions about when and how courts should control the use of expert evidence.

The accident in this case involved a single vehicle that skidded out of control, left the road, and rolled over. The Plaintiff (here Respondent) was one of four passengers. The driver and the other three passengers suffered only minor injuries, but the Plaintiff was seriously hurt. He alleged a design defect had caused the roof of the car to collapse onto his head.

In support of this allegation the Plaintiff proffered the testimony of the engineering expert, who opined that the roof should have been designed to sustain average forces between 48,000 and 71,000 pounds. The District Court noted its *"extremely low* opinion of [the expert's] credibility and of the validity of his opinions," App. to Petitioners' Petition at 18a (emphasis in original), but nonetheless refused to exercise its *Daubert* gatekeeping authority. The expert's testimony was admitted over the Defendants' objections, and the case proceeded to a Plaintiff's verdict.

The Tenth Circuit affirmed, holding *Daubert*'s requirement that scientific testimony must be based on valid scientific reasoning or methodology did not apply because the expert had not articulated *any* reasoning or methodology. His testimony was not subject to gatekeeping because "application of the *Daubert* factors is unwarranted in cases where expert testimony is based solely upon experience or training." *Compton v. Subaru of America, Inc.*, 82 F.3d 1513, 1518 (10th Cir. 1996).

SUMMARY OF ARGUMENT

The Tenth Circuit's reading of *Daubert* in this case raises two fundamental questions. First, does *Daubert's* guidance on Fed. R. Evid. 702 cover a field like engineering? Second, if an expert develops an opinion that necessarily involved the interpretation of data and the reasoned application of scientific principles, can *Daubert* be avoided if the expert simply disavows any reasoning and claims his or her opinion was based only on training and experience? The answer to the first question must be yes; the answer to the second must be no.

Daubert established that the admissibility of *scientific* evidence depends on the *scientific* validity of an expert's reasoning or methodology, but this Court's focus on science simply reflected the facts of that case. Just because *Daubert* addressed only science does not mean that other kinds of expert testimony should be subjected to less scrutiny. As a matter of logic, if scientists must confine their expert testimony to valid science, all experts should be limited to opinions that are appropriate within the context of their field of expertise.

As a field closely akin to science, engineering falls squarely within the criteria for assessing scientific validity that are outlined in *Daubert*.[1] Even if viewed as technical

---

[1] Characterized as "general observations" in *Daubert*, these criteria are: (1) testability and testing, (2) peer review and publication, (3) error rate and the maintenance of standards, and (4) general acceptance within the relevant scientific community. 509 U.S. at 593-94.

knowledge, however, expert engineering opinions should derive from valid engineering methodology and reasoning to be admissible. *Daubert's* basic principle—that expert testimony must be valid within the context of the expert's field—must still govern the analysis. Most courts have taken this approach to engineering evidence and even to evidence from fields quite different from science. The Tenth Circuit's ruling in this case therefore creates a serious split in the circuits.

The Tenth Circuit's ill-conceived "experience and training" test for admissibility also raises issues beyond the applicability of *Daubert* to engineering expert testimony. It would allow an expert from any field governed by *Daubert* to avoid judicial gatekeeping when the expert cannot or will not explain the reasoning or methodology underlying his or her opinions. Other courts which have considered the issue have recognized that when experts do not explain how they reach their conclusions the validity of their reasoning or methodology cannot be assessed by either the court or the jury, and their testimony should be excluded. The Tenth Circuit has taken a very different approach. Though it apparently would exclude the expert who ventures a bad explanation, it would admit testimony based on no explanation at all.

The "experience and training" test is particularly inappropriate for engineering testimony, the validity of which depends on the reasoned application of scientific principles. The expert's speculative and untested alternative design standard in this case does not satisfy the criteria for valid science outlined in *Daubert,* and is contrary to good engineering practice. The trial court's decision to admit this testimony, and the Tenth Circuit's decision to affirm were erroneous.

ARGUMENT

I. THE TENTH CIRCUIT HAS CREATED A SPLIT IN THE CIRCUITS BY HOLDING *DAUBERT*'S GUIDANCE INAPPLICABLE TO THE ENGINEERING TESTIMONY IN THIS CASE.

Whether engineering testimony is regarded as scientific or technical knowledge, *Daubert* applies to the determination of its admissibility. As a field based on scientific knowledge, engineering should be evaluated under the kind of criteria this Court outlined in *Daubert*. No matter how engineering is classified for Rule 702 purposes, however, the Tenth Circuit's ruling that an engineer can escape judicial gatekeeping is at odds with *Daubert*, and it conflicts with holdings from other circuits.

A. Because Engineering Is Rooted in Scientific Knowledge, *Daubert*'s Criteria for Evaluating Scientific Validity Generally Govern the Admissibility of Expert Engineering Testimony.

Engineering is "the profession that puts scientific knowledge to practical use," 6 THE WORLD BOOK ENCYCLOPEDIA 284 (1996). While scientists concentrate more on making discoveries, engineers work more at solving practical problems, but they use scientific knowledge extensively. Their field has been defined as "the science by which the properties of matter and the sources of energy in nature are made useful to man in structures, machines, and products." WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 752 (1986). Thus, the criteria outlined in *Daubert* for assessing the validity of a scientific expert's reasoning and methodology also apply to the assessment of engineering testimony.

Brown v. Miska, 1995 WL 723156 (S.D. Tex. July 19, 1995), an unpublished decision from the Southern District of Texas, is particularly instructive with regard to the expert testimony in this case. *Brown* involved an automobile accident and a claim that the plaintiff's in-

juries occurred because a seat back had failed. Though he never tested or even saw the seat, the plaintiff's expert opined it was defective. The District Court excluded this testimony and granted summary judgment. It found that "engineering generally entails the practical application of scientific methods and measurements," *id.* at *4, and that the lack of explanation and testing was an important consideration.

> Without any account of [the expert's] intermediate reasoning or methodology, the validity of that reasoning cannot be tested . . . [and without testing] it [was] incapable of meeting the 'validity' criterion of *Daubert*.

Id. The Fifth Circuit affirmed. *Brown v. Miska*, 96 F.3d 1445 (5th Cir. Aug. 29, 1996) (Table No. 95-40758).

B. Even if Viewed as "Technical" Rather Than "Scientific" Knowledge, Engineering Is Covered by *Daubert*'s Guiding Principle That Expert Testimony Must Validly Derive From the Expert's Field.

Daubert's central message is that an expert's testimony must reflect the special knowledge found in his or her field of expertise. Although this Court's decision in *Daubert* addressed only science, 509 U.S. 590 n.8, the holding that the admissibility of scientific evidence depends on the scientific validity of an expert's reasoning or methodology, 509 U.S. 592-593, must, as a matter of simple logic, extend to other kinds of expert testimony. Economists, for example, should be allowed to testify only about opinions validly based on the principles of economics.

Whatever kind of expertise is at issue, a court should evaluate the validity of the methodology and reasoning underlying an expert's testimony to assure that it in fact constitutes knowledge from the expert's field. The specific criteria set forth in *Daubert* for determining the validity of scientific evidence may not apply without modification

to other fields,[2] but whatever criteria experts in a field use to evaluate each other's work should apply in a courtroom just as they do elsewhere.[3] As Professor Faigman has written, limiting *Daubert* to science "displays a crabbed interpretation of the . . . opinion as well as a misconstruction of the principles underlying Rule 702." David L. Faigman, *Mapping the Labyrinth of Scientific Evidence*, 46 Hastings L. J. 555, 559 (1995). *See also* American College of Trial Lawyers, *Standards and Procedures for Determining the Admissibility of Expert Evidence After* Daubert, 157 F.R.D. 571, 577 (1994) ("there [should] be a single conceptual framework for evaluating the admissibility of all types of expert evidence"); Edward J. Imwinkelried, *The Next Step After* Daubert: *Developing a Similarly Epistemological Approach to Ensuring the Reliability of Nonscientific Expert Testimony*, 15 Cardozo L. Rev. 2271, 2281 (1994) ("If the mention of scientific knowledge [in Rule 702] suffices to mandate reliability standards for scientific testimony, a fortiori the mention of nonscientific expert knowledge should compel the courts to seek to formulate reliability standards for that type of expert evidence as well."); G. Michael Fenner, *The* Dau-

---

[2] Opponents of extending *Daubert* to areas of expertise other than science generally overlook or ignore the broad principle on which the decision is founded and assume that all the specific factors outlined by the court would have to be used to analyze the validity of nonscientific knowledge, which obviously is wrong. *See, e.g.*, Lisa M. Agrimonti, Note, *The Limitations of* Daubert *and Its Misapplication to Quasi-Scientific Experts, A Two-Year Case Review of* Daubert v. Merrell Dow Pharmaceuticals, Inc., 35 Washburn L. J. 134 (1995).

[3] Of course, in some cases the issue may be the validity of the field itself. Astrology, even if done in accordance with principles recognized within the field, would not be admissible. *See* Margaret A. Berger, *Evidentiary Framework in* REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 37, 73-75 (Federal Judicial Center 1994). In this case, however, the issue is the validity of conclusions ostensibly reached through the methods and reasoning of engineering, a field that itself is not in dispute.

bert *Handbook: The Case, Its Essential Dilemma, and Its Progeny*, 29 Creighton L. Rev. 939, 948 (1996) ("[t]he general point . . .—that when expert testimony is proffered and resisted, the trial court should hold a hearing to determine whether the evidence is reliable and relevant—applies to all expert evidence").

Indeed, the specific *Daubert* criteria for assessing scientific validity may play a role in the evaluation of other kinds of expert evidence as well. The listing of three different kinds of expert knowledge in Rule 702 does not mean that each requires a completely separate mode of analysis. Though perhaps less important for some kinds of evidence than for others, scientific criteria can help in determining the validity and reliability of other forms of expert testimony. *See* Linda Sandstrom Simard & William G. Young, Daubert*'s Gatekeeper: The Role of the District Judge in Admitting Expert Testimony*, 68 Tul. L. Rev. 1457, 1470-74 (1994). Even an art appraiser's estimates can be tested by collecting data and comparing those estimates with actual selling prices, and for a field like engineering testing should be a basic requirement.

C. The Tenth Circuit's Ruling That an Engineer Can Escape Judicial Gatekeeping Is at Odds With *Daubert* and Conflicts With Holdings From Other Circuits.

Courts other than the Tenth Circuit have held that *Daubert* is applicable to engineering and to a wide range of fields quite different from science. As the Sixth Circuit has made clear, *Daubert*'s "language relative to the 'gatekeeper' function of federal judges is applicable to all expert testimony offered under Rule 702." *Berry v. City of Detroit*, 25 F.3d 1342, 1350 (6th Cir. 1994), *cert. denied*, 115 S. Ct. 902 (1995). The Seventh Circuit has similarly recognized the need to conduct a preliminary assessment of all expert evidence. In *Frymire-Brinati v. KPMG Peat Marwick*, 2 F.3d 183 (7th Cir. 1993), the Seventh Circuit cited *Daubert* for this proposition in the

course of excluding an expert accountant's testimony. *See also Cummins v. Lyle Industries,* 93 F.3d 362 (7th Cir. 1996) (affirming exclusion of expert testimony regarding alternative design for a trim press); *Pries v. Honda Motor Co., Ltd.,* 31 F.3d 543 (7th Cir. 1994) (finding testimony about alleged malfunction of seatbelt buckle inadmissible).

The Third Circuit has applied *Daubert* to exclude the testimony of a facility safety director who had attempted to simulate an accident, *Habecker v. Clark Equipment Co.,* 36 F.3d 278 (3d Cir. 1994), *cert. denied,* 115 S.Ct. 1313 (1995), and has even followed its guidance in addressing non-expert opinion evidence under Fed. R. Evid. 701. *Asplundh Manufacturing Division v. Benton Harbor Engineering,* 57 F.3d 1190, 1201-2 (3d Cir. 1995). The Fifth Circuit, in *Marcel v. Placid Oil Co.,* 11 F.3d 563 (5th Cir. 1994), affirmed a trial court's exclusion of an economist's testimony, and cited *Daubert* for the proposition that judges must assure that an expert's testimony rests on a reliable foundation and is relevant to the task at hand. The Eighth Circuit has followed *Daubert* in excluding expert engineering testimony regarding an alternative design for a safety guard on a stump cutter, *Pestel v. Vermeer Manufacturing Co.,* 64 F.3d 382 (8th Cir. 1995), and in admitting the testimony of an economist regarding damages. *Ventura v. Titan Sports, Inc.,* 65 F.3d 725 (8th Cir. 1995), *cert. denied,* 116 S.Ct. 1268 (1996). *See also Peitzmeier v. Hennessy Industries, Inc.,* 97 F.3d 293 (8th Cir. 1996) (explicitly rejecting the argument that *Daubert* does not apply to the review of engineering testimony).

The Tenth Circuit's decision in this case is clearly contrary to this substantial body of post-*Daubert* caselaw. The split in the circuits involves more than just the Tenth Circuit, however. The Second Circuit also has split from the majority by missing the broad general principle at the heart of *Daubert. See, e.g., Iacobelli Con-*

struction, Inc. v. County of Monroe, 32 F.3d 19 (2d Cir. 1994) (foundation engineering not within scope of *Daubert*).

II. THE TENTH CIRCUIT'S "EXPERIENCE AND TRAINING" TEST FOR DETERMINING THE ADMISSIBILITY OF EXPERT TESTIMONY IS CONTRARY TO *DAUBERT*, AND IS PARTICULARLY INAPPROPRIATE FOR ENGINEERING TESTIMONY.

Beyond the applicability of *Daubert* to engineering expert testimony, the Tenth Circuit's ill-conceived "experience and training" test for admissibility raises issues affecting expert testimony from a wide variety of fields. It would allow an expert from any field governed by *Daubert* to avoid judicial gatekeeping when the expert does not explain the reasoning or methodology underlying his or her opinions. This approach conflicts with other circuits that have recognized the need for experts to provide reasoned explanations for their conclusions. For a field like engineering, in which conclusions are based on the rational application of scienitfic principles, focusing only on experience and training is particularly inappropriate. Engineering design standards result from careful testing and considered review of data, not the unexplained hunches of a single individual.

A. The "Experience and Training" Test Would Eviscerate *Daubert*, and It Conflicts With Decisions From Other Circuits.

An expert's testimony can consist of facts from his or her field of expertise, or conclusions based on those facts and other evidence in a case.[4] In other words, experts

---

[4] As this Court noted in *Daubert*, "[the word 'knowledge'] 'applies to any body of known facts or to any body of ideas inferred from such facts or accepted as truths on good grounds.' Webster's Third New International Dictionary 1252 (1986)." 509 U.S. at 590.

sometimes provide nothing more than information which they know because of their experience, training, or education; and sometimes they explain and interpret facts, or draw inferences from them. To borrow an example from the Sixth Circuit, one could prove that bumblebees always take off into the wind by introducing the testimony of a beekeeper who had observed bees for many years, but to explain how bumblebees fly, and why they take off into the wind, would require a different kind of expert, such as an aeronautical engineer. *Berry v. City of Detroit*, 25 F.3d 1342, 1349-50 (6th Cir. 1994).

Both the beekeeper and the engineer would be providing expert knowledge, and both should be subject to scrutiny under the fundamental *Daubert* principle that all expert testimony must constitute valid knowledge from the expert's field. So long as it is limited to factual observations, testimony like the beekeeper's may be quite reliable and admissible, even if it is based solely on experience. Without supporting data and valid reasoning, however, neither a beekeeper nor an engineer should be allowed to opine on why or how a bumblebee flies. *Daubert* requires a court to determine both whether a reasoned explanation is necessary, and if so, whether the explanation provided is in fact valid.[6]

---

[6] In Respondent's Brief in Opposition to Petitioner's Petition there is extensive discussion of the expert's education and experience, and much is made of the fact that he inspected the accident vehicle and a similar vehicle that was undamaged, and that he "made notes, took measurements, photographs, and made drawings and diagrams of the welding pattern of the roof and roof support structures of the Accident Vehicle." Brief in Opposition at 4. He then "compared his measurements with the headroom in hundreds of other vehicles he had examined and compiled a list of headroom measurements from a variety of sources." *Id.* What is completely missing from this discussion is any explanation of how these various measurements are related to the accident vehicle. For example, to what forces were the other cars subjected, and how did those forces compare with the forces to which the accident vehicle was subjected? Thus the expert's testimony was not relevant or admissible

The Tenth Circuit has eliminated these requirements by allowing an expert to escape scrutiny just by saying he or she used no methodology or reasoning. Its ruling in this case would allow a witchdoctor to testify about what caused a patient's disease based solely on a lifetime of observing sick people; and it would let an otherwise qualified physician base testimony on witchdoctory and then hide behind the assertion he or she used no definable methodology or reasoning. If allowed to stand, the "experience and training" approach would eviscerate this Court's landmark ruling in *Daubert* that expert testimony must constitute valid expertise. This gross misinterpretation of Rule 702 would permit experts to avoid gatekeeping when it is most warranted.

No other circuit has adopted the Tenth Circuit's approach, and several courts have emphasized that unexplained and untested conclusions are inadmissible. *See, e.g., Rosen v. Ciba-Geigy Corp.*, 78 F.3d 316, 319 (7th Cir.), *cert. denied*, 117 S.Ct. 73 (1996) (affirming exclusion of medical testimony regarding the cause of a heart attack because the expert had offered "neither a theoretical reason . . . or any experimental, statistical or other scientific data from which . . . a causal relation might be inferred or which might be used to test a hypothesis founded on theory"); *Rutigliano v. Valley Business Forms*, 929 F. Supp. 779, 786 (D. N.J. 1996) (excluding medical testimony regarding causation where expert had relied primarily on "expertise and experience"); *Sepulveda v. Department of Health and Human Services*, 1995 WL 502887 at *1n.8 (Fed. Cl. Aug. 10, 1995) (noting that "reputable medical or scientific explanation does not

---

even as a report on what he had obeserved. Moreover, there is absolutely no rationale given for how the expert arrived at his opinion about a very specific alternative design standard based on this information or anything else. The discussion of how the roof of the accident vehicle collapsed, *id.* at 6-7, is no more helpful. Whether the roof should have been stronger was at issue, not the details of how it deformed during the accident.

simply mean . . . any theory that a medical expert is willing to espouse"). The cases in which experts have been allowed to testify based primarily on experience have involved the kind of direct factual observations for which this approach is appropriate. *See, e.g., Thomas v. Newton International Enterprises,* 42 F.3d 1266 (9th Cir. 1994) (reversing trial court's exclusion of testimony from experienced longshore worker regarding what is usually done to prevent falls down open hatches); *United States v. Locascio,* 6 F.3d 924 (2d Cir. 1993), *cert. denied,* 114 S.Ct. 1646 (1994) (testimony about typical structure of crime families).

B. Requiring an Explanation of Reasoning and Methodology Is Particularly Important for a Field Like Engineering.

When, as in this case, the practicability and feasibility of a design standard are at issue, the need for reasoned analysis and testing is particularly great. Many of the factors that must be considered in comparing designs are "product- and manufacturer-specific, and most cannot be determined reliably without testing." *Cummins v. Lyle Industries,* 93 F.3d 362, 369 (7th Cir. 1996). *See also Deimer v. Cincinnati Sub-Zero Products, Inc.,* 58 F.3d 341, 344 (7th Cir. 1995) (affirming exclusion of engineering testimony where the expert "did not conduct any studies or analysis to substantiate his opinion"); *Peitzmeier v. Hennessy Industries, Inc.,* 97 F.3d 293, 297 (8th Cir. 1996) (affirming exclusion where an expert had "shown no factual basis to support an opinion that his design changes are feasible or that they would not hinder the efficacy of [the tire-changing machine]").

Indeed, the expert whose testimony is at issue in this case made repeated reference to his use of general engineering concepts, Petitioners' Petition at 4, and he acknowledged the complexity of the design process and the importance of testing. *Id.* at 5. Yet the Appellate Court held that his testimony should be admitted precisely be-

cause he provided no reasoned explanation of how he had used the engineering concepts he cited, and had done none of the testing he conceded was vital. Again, if allowed to stand, this blatantly illogical ruling will undo *Daubert* not only for engineering testimony, but for expert testimony from a wide variety of fields.

C. Engineering Standards Are Based on Careful Testing and Considered Review of Data, Not on a Single Engineer's Experience and Training.

The Plaintiff's claim in this case boils down to the proposition that the roof of the car in which he was riding should have been stronger, and that the standard governing its design should have been different, but his expert had no reasoned explanation for this opinion, which was little more than a speculative hunch. Engineering, however, involves much more than a vague application of experience and training.

The engineering process begins with the formulation of a problem. Ideas and concepts are then developed, and they are tested through the use of models and analysis. Finally, a design and its function are described in a proposal or report. George C. Beakley & Ernest G. Chilton, DESIGN: SERVING THE NEEDS OF MAN 194 (1974).

The development of standards requires particular thoroughness and care. According to the ASTM, one of the foremost private standard setting bodies in the United States,

> technically competent standards result when a full consensus of all concerned parties is achieved and rigorous due process procedures are followed. This philosophy and standards development system ensure technically competent standards having the highest credibility when critically examined and used as the basis for commercial, legal, or regulatory actions.

Foreword to ANNUAL BOOK OF ASTM STANDARDS, Vol. 00.01 at iv (1992).

The Plaintiff's expert testimony in this case clearly does not reflect this kind of careful testing and considered review of data, and the expert's invocation of his experience and training do not heal its basic deficiencies. As either scientific or technical knowledge it unequivocally fails the *Daubert* test. The District Court should not have ruled this testimony admissible, and the Tenth Circuit should have reversed its ruling.

III. THE ISSUES IN THIS CASE ARE IMPORTANT.

As noted several times, this case is about far more than one automobile accident and one expert witness. *Daubert* has greatly improved the way in which federal courts resolve disputes about expert testimony from many fields,[6] and in many kinds of cases,[7] which is why *amici* are so concerned about the Tenth Circuit's ruling. The "experience and training" test threatens this post-*Daubert* progress. Because some district courts have already followed it, *see Liriano v. Hobart Corp.*, 1996 WL 304337, at *4-5 (S.D.N.Y. July 23, 1996); *Waitek v. Dalkon Shield Claimants Trust*, 934 F.Supp. 1068, 1087 n.10 (N.D.

---

[6] Several commentators have remarked on the improvement wrought by *Daubert*. *See, e.g.*, Arvin Maskin, *The Impact of* Daubert *on the Admissibility of Scientific Evidence: The Supreme Court Catches Up With a Decade of Jurisprudence*, 15 Cardozo L. Rev. 1929, 1932 (1994) (*Daubert* is "the beginning of an ongoing process in the development of practical approaches to maintaining the integrity of the fact-finding process."); Marc S. Klein, *The Revolution in Practice and Procedure:* "Daubert *Hearings*", 1 Shepard's Expert & Sci. Evidence Q. 655, 656 (1994) (judicial gatekeeping "will *revolutionize* practice and procedure in this field" (emphasis in original)); Bert Black, Francisco J. Ayala & Carol Saffran-Brinks, *Science and the Law in the Wake of* Daubert: *A New Search for Scientific Knowledge*, 72 Tex. L. Rev. 715, 802 (1994) (expressing hope that *Daubert* will bring law and science into closer accord).

[7] A WestLaw database containing all cases that have cited *Daubert* already includes almost 800 cases. The kinds of cases in which *Daubert* has been cited range from tax fraud to murder, and from condemnation to patent law. It's precedential reach goes far beyond toxic torts and product liability cases.

Iowa 1996), prompt review by this Court is extremely important.

CONCLUSION

For the foregoing reasons, *amici* urge this Court to review the Tenth Circuit's ruling in this case, to make clear the applicability of *Daubert* to fields like engineering and to all other expert testimony, and to reject the "experience and training" test for determining the admissibility of expert testimony.

Respectfully submitted,

Of Counsel:

DAVID F. ZOLL
DONALD D. EVANS
CHEMICAL MANUFACTURERS ASSOCIATION
1300 Wilson Boulevard
Arlington, Virginia 22209
(703) 741-5000

ROBIN S. CONRAD
NATIONAL CHAMBER LITIGATION CENTER, INC.
1615 H Street, N.W.
Washington, D.C. 20062
(202) 463-5337

November 22, 1996

BERT BLACK *
DANIEL R. CHEMERS
WEINBERG & GREEN LLC
100 South Charles Street
Baltimore, Maryland 21201
(410) 332-8600

CLIFTON T. HUTCHINSON
HUGHES & LUCE, L.L.P.
1717 Main Street
Suite 2800
Dallas, Texas 75201
(214) 939-5500

Counsel for Amici Curiae

* Counsel of Record

(4)

No. 96-645

Supreme Court, U.S.
FILED
NOV 22 1996
CLERK

IN THE
Supreme Court of the United States
OCTOBER TERM, 1996

SUBARU OF AMERICA, INC., and
FUJI HEAVY INDUSTRIES, LTD.,
Petitioners,

v.

STEVEN D. COMPTON,
Respondent.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Tenth Circuit

BRIEF AMICI CURIAE OF THE PRODUCT LIABILITY ADVISORY COUNCIL, INC., AND NATIONAL ASSOCIATION OF MANUFACTURERS IN SUPPORT OF PETITIONERS

Of Counsel
HUGH F. YOUNG, JR.
PRODUCT LIABILITY ADVISORY COUNSEL, INC.
1850 Centennial Park Drive
Suite 510
Reston, VA 22091
(703) 264-5300

JAN S. AMUNDSON
General Counsel
QUENTIN RIEGEL
Deputy General Counsel
NATIONAL ASSOCIATION OF MANUFACTURERS
1331 Pennsylvania Ave. N.W.
Suite 1500—North Lobby
Washington, D.C. 20004-1790
(202) 637-3000

MARY A. WELLS
Counsel of Record
SUANNE M. DELL
GREGORY E. SOPKIN
WELLS, ANDERSON & RACE LLC
1700 Broadway, Suite 1850
Denver, CO 80290
(303) 830-1212

WILSON - EPES PRINTING CO., INC. - 789-0096 - WASHINGTON, D.C. 20001

TABLE OF CONTENTS

	Page
INTEREST OF AMICI CURIAE	1
SUMMARY OF ARGUMENT	2
ARGUMENT	3
I. *COMPTON* AND ITS PROGENY ARE IN DIRECT CONFLICT WITH THE COURT'S HOLDING IN *DAUBERT* AND DECISIONS FROM OTHER CIRCUITS, RESULTING IN CONFUSION TO TRIAL COURTS, LITIGANTS AND JURORS	3
A. *Compton's* Progeny Promotes Confusion	6
B. There is Sharp Division in the Circuits Regarding the Standards For Admissibility of Expert Opinion	7
II. RULE 702 AND *DAUBERT* APPLY TO EXPERT TESTIMONY IN A WELL-DEFINED FIELD OF ENDEAVOR ENCOMPASSING RECOGNIZED ANALYTICAL METHODOLOGY OF TECHNIQUES	12
A. Rule 702 and *Daubert* Require Scrutiny of the Expert's Methodology	13
B. *Daubert* Applies to "Scientific, Technical or Other Specialized Knowledge," Which Includes Engineering or Applied Science Expert Opinion	14
C. Credentials and a "Logical Basis" Are Not Enough to Satisfy *Daubert*	17
D. *Compton's* Relinquishment of Trial Courts' Gatekeeper Role Encourages Unreliable Expert Testimony	18
CONCLUSION	20
APPENDIX	1a

TABLE OF AUTHORITIES

CASES — Page

American & Foreign Ins. Co. v. General Electric Co., 45 F.3d 135 (6th Cir. 1995) 7, 8
Arrendondo v. Uniroyal Goodrich Tire Co., 1995 U.S. Dist. LEXIS 19943 (D. Ariz. 1995) 11
Becker v. National Health Prods., Inc., 896 F. Supp. 100 (N.D.N.Y. 1995) 6
Berry v. City of Detroit, 25 F.3d 1342 (6th Cir. 1994), *cert. denied*, 115 S. Ct. 902, 130 L. Ed. 2d 786 (1995) 8
Brown v. Miska, 1995 U.S. Dist. LEXIS 17197 (S.D. Tex. 1995), *aff'd without op.*, 96 F.3d 1455 (5th Cir. 1996) 6, 10
Camp Dresser & McKee, Inc. v. Home Ins. Co., 568 N.E.2d 631 (Mass. App. 1991) 15
Compton v. Subaru of Am., Inc., 82 F.3d 1513 (10th Cir. 1996), *reh'g denied* 1, 4, 5, 12, 14
Cook v. American S.S. Co., 53 F.3d 733 (6th Cir. 1995) 7
Cummins v. Lyle Indus., 93 F.3d 362 (7th Cir. 1996) 8, 17
Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993) 1, 3, 13, 14, 16, 18
Daubert v. Merrell Dow Pharmaceuticals, Inc. (Daubert II), 43 F.3d 1311 (9th Cir. 1995) 5, 12
Deimer v. Cincinnati Sub-Zero Prods., Inc., 58 F.3d 341 (7th Cir. 1995) 8
DeLuca v. Merrell Dow Pharmaceuticals Inc., 911 F.2d 941 (3d Cir. 1990), *on remand*, 791 F. Supp. 1042 (D. N.J. 1992), *aff'd without op.*, 6 F.3d 778 (3d Cir. 1993) 18
Fellner v. Supreme Corp., 1995 U.S. Dist. LEXIS 2166 (D. N.J. 1995) 17
Hopkins v. NCR Corp., 1994 U.S. Dist. LEXIS 17273 (M.D. La. 1994) 11
Joiner v. General Electric Co., 78 F.3d 524 (11th Cir. 1996) 14
Jones v. Otis Elevator Co., 861 F.2d 655 (11th Cir. 1988) 18

TABLE OR AUTHORITIES—Continued

	Page
Liriano v. Hobart Corp., 1996 U.S. Dist. LEXIS 7727 (S.D.N.Y. 1996)	6
Mid-State Fertilizer Co. v. Exchange National Bank, 877 F.2d 1333 (7th Cir. 1989)	7
O'Connor v. Commonwealth Edison Co., 13 F.3d 1090 (7th Cir. 1994)	9
Ohio ex rel Montgomery v. Louis Trauth Dairy, Inc., 1996 U.S. Dist. LEXIS 6667 (S.D. Ohio 1996)	17
Peitzmeier v. Hennessy Indus., Inc., 97 F.3d 293 (8th Cir. 1996)	9
Pestel v. Vermeer Mfg. Co., 64 F.3d 382 (8th Cir. 1995)	9
Pries v. Honda Motor Co., 31 F.3d 543 (7th Cir. 1994)	9
Roback v. V.I.P. Transp., Inc., 1994 U.S. Dist. LEXIS 14054 (N.D. Ill. 1994)	11
Rosen v. Ciba-Geigy Corp., 78 F.3d 316 (7th Cir. 1996)	7, 8, 17, 18
Stanczyk v. Black & Decker, Inc., 836 F. Supp. 565 (N.D. Ill. 1993)	11
Turpin v. Merrell Dow Pharmaceuticals, Inc., 959 F.2d 1349 (6th Cir. 1992)	13
United States v. Davis, 40 F.3d 1069 (10th Cir. 1994)	14
United States v. Muldrow, 19 F.3d 1332 (10th Cir. 1994), *cert. denied*, 115 S. Ct. 175, 130 L. Ed. 2d 110 (1994)	12
United States v. Rice, 52 F.3d 843 (10th Cir. 1995)	4, 13
United States v. Rincon, 28 F.3d 921 (9th Cir. 1994), *cert. denied*, 155 S. Ct. 605, 130 L. Ed. 2d 516 (1994)	17
United States v. Simpson, 7 F.3d 186 (10th Cir. 1993)	5
Waitek v. Dalkon Shield Claimants Trust, 934 F. Supp. 1068 (N.D. Iowa 1996)	6

TABLE OR AUTHORITIES—Continued

Statutes and Rules:	Page
Fed. R. Evid. 702	13
K.S.A. § 74-7003(h)	15
Miscellaneous:	
W. Donaher, H. Piehler, A. Twerski & A. Weinstein, *The Technological Expert in Products Liability Litigation*, 52 Tex. L. Rev. 1303 (1974)	19
Michael Hoenig, *Drawing the Line on Expert Opinions*, NYLJ, p. 1 (May 22, 1985)	19
Webster's II New World College Dictionary, (1995 Ed.)	14, 16

INTEREST OF AMICI CURIAE

The Product Liability Advisory Council, Inc. ("PLAC") is a nonprofit corporation with 114 corporate members from a broad cross-section of American industry, and the product liability lawyers who represent them. Its corporate members include manufacturers and sellers in industries ranging from electronics to automobiles to pharmaceutical products and medical devices.[1] PLAC's purpose is to file *amicus* briefs on behalf of its members on issues that affect the law of product liability. PLAC has submitted many *amicus* briefs in state and federal courts, including this Court.

The National Association of Manufacturers (the "NAM") is the nation's oldest and largest broad-based industrial trade association. Its more than 14,000 member companies and subsidiaries, including 10,000 small manufacturers, employ approximately eighty-five percent of all manufacturing workers and produce over eighty percent of the nation's manufactured goods. More than 158,000 additional businesses are affiliated with the NAM through its Associations Council and National Industrial Council. The NAM's interest on issues that affect the law of product liability is identical to the interest of PLAC.

In this case, *Compton v. Subaru of Am., Inc.*, 82 F.3d 1513 (10th Cir. 1996), *reh'g denied*, the United States Court of Appeals for the Tenth Circuit ruled that the factors set forth in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) for the analysis of admissibility of expert opinion testimony, do not apply to an aerospace and mechanical engineer whose opinion is based solely upon his experience or training, rather than application of recognized engineering methodology. Respondent's Opposition Brief clearly states why the Tenth Circuit deemed *Daubert* inapplicable to the expert's testimony:

> Much of Bihlmeyer's knowledge is based on scientific principles (force dynamics, strength analysis, strength of materials), however, his conclusions are not derived by the scientific method . . ..

---

[1] A list of PLAC's corporate members appears in the appendix hereto.

See Respondent's Opposition Brief, p. 17. This statement crystallizes the exact question that is before the Court: Should an engineering expert's opinion involving scientific principles, *vis,* the force dynamics, strength analysis, and strength of materials of an automobile roof, be admitted when the opinion was not derived by scientific methodology?

Amici curiae are well-situated to address this issue. Our members are subject to defending an increasing number of product liability lawsuits. These are suits which require plaintiffs to produce admissible expert testimony in order to prove a prima facie case. The expert testimony is most often in areas of applied science or technology, rather than "pure" science. PLAC and NAM members are often faced with unreliable expert testimony admitted by courts applying inconsistent standards; these inconsistent standards impair the ability of manufacturers to test the reliability of an expert's opinion, and consequently to defend against plaintiffs' allegations of product defect and the like. Amici curiae offer a valuable perspective on why the circuit and district courts need this Court's guidance on the application of *Daubert,* and why the clear incentive offered by *Compton*—for experts purposefully to forego utilizing any recognized methodology as the basis of their opinions, instead relying solely on training and experience so as to avoid the *Daubert* reliability analysis, yielding a greater chance of getting unsound opinions to the jury—must be avoided.[2]

SUMMARY OF ARGUMENT

A. *Compton* and its progeny are in direct conflict with the Court's holding in *Daubert* and decisions from other circuits, resulting in confusion to trial courts, litigants and jurors; the Court should accept Petitioners' Petition for A Writ of Certiorari to give much needed direction and end this confusion.

---

[2] The Parties' written consent to the submission of this brief is on file with the Court.

B. This Court should grant the Writ to explicitly hold that Rule 702 and *Daubert* apply to expert testimony in a well-defined field of endeavor encompassing recognized analytical methodology or techniques.

ARGUMENT

I. *COMPTON* AND ITS PROGENY ARE IN DIRECT CONFLICT WITH THE COURT'S HOLDING IN *DAUBERT* AND DECISIONS FROM OTHER CIRCUITS, RESULTING IN CONFUSION TO TRIAL COURTS, LITIGANTS AND JURORS

In *Daubert* this Court granted certiorari "in light of sharp divisions among the courts regarding the proper standard for the admission of expert testimony." *Daubert*, 509 U.S. at 585. *Daubert* set forth a flexible paradigm for courts to use in the analysis of admissibility of proffered expert testimony. The *Daubert* framework starts from the assumption that the expert's opinion has a reliable basis in knowledge and experience; it does not end there. 509 U.S. at 592. Despite the Court's holding in *Daubert*, some lower courts have created a narrow box for the application of the *Daubert* analysis into which only novel scientific opinions are put. Outside that box some courts have admitted expert opinion testimony without scrutinizing it as directed by *Daubert*. This case is an example. Implementation of the teaching of *Daubert* directs that such scrutiny should be so extended to expert opinion in well defined fields of endeavor which utilize recognized analytical methodology or techniques, but the Tenth Circuit decided otherwise. The sharp division among the courts as to the standard of analysis applicable to expert testimony in the arena of applied sciences and expert opinion relying solely on experience or training rather than recognized methods and techniques, demands resolution through a grant of Petitioners' Petition for a Writ of Certiorari.

The Tenth Circuit's misapprehension of *Daubert* is crystallized in these words from its *Compton* opinion:

> The language in Daubert makes clear the factors outlined by the Court are applicable only when a proffered expert relies on some principle or methodology. In other words, application of the Daubert factors is unwarranted in cases where expert testimony is based solely upon experience or training. *See, e.g., U.S. v. Rice,* 52 F.3d 843, 847 (10th Cir. 1995) (citing Daubert but applying a traditional rule 702 analysis to tax attorney's expert testimony which was based upon his personal experiences). In such cases, Rule 702 merely requires the trial court to make a preliminary finding that proffered expert testimony is both relevant and reliable while taking into account "the inquiry envisioned by Rule 702 is . . . a flexible one." Daubert, 113 S.Ct. at 2795-97.

Compton, 82 F.3d at 1518-1519. The Tenth Circuit later stated, "In sum, we do not believe Daubert completely changes our traditional analysis under Rule 702. Instead, Daubert sets out additional factors the trial court should consider under Rule 702 if an expert witness offers testimony based upon a particular methodology or technique." *Id.* at 1519. We have scoured the *Daubert* opinion and find no such authority there.

There is no question that the expert in this case, Larry Bihlmeyer, based his opinion on subjective belief or unsupported speculation. The trial court said Bihlmeyer had "the most ill-supported weakest personal opinion" he ever heard. Yet the Tenth Circuit affirmed the admission of his testimony because he "possessed the basic qualifications to give such testimony," and "reached his expert conclusions by drawing upon general engineering principles and his twenty-two years of experience as an automotive engineer." 82 F.3d at 1519. The Tenth Circuit stated *Daubert* "simply has little bearing on Mr. Bihlmeyer's testimony" because he did not employ "some particular methodology or technique." *Id.* In short, the Tenth Circuit confuses the requirement that the expert have certain credentials with the requirement that the expert arrive at his opinion uilizing a methodology recognized by his field.

It is not correct to suggest, as Respondent does in his Opposition Brief, that the trial court's admission of Bihlmeyer's testimony was a factual decision, as opposed to a resolution of a question of law. The courts' gatekeeper role requires a preliminary *legal* determination that the expert has satisfied the requirements of Rule 702. *See, e.g., Daubert v. Merrell Dow Pharmaceuticals, Inc. (Daubert II)*, 43 F.3d 1311, 1319 (9th Cir. 1995) ("Dr. Palmer's testimony is inadmissable as a matter of law under Rule 702.") The *Compton* court acknowledged that the "applicability of Daubert is a question of law," 82 F.3d at 1517, and proceeded to decide that, as a matter of law, *Daubert* does not apply to an expert engineer's testimony that an automobile roof was defectively designed. It is *this* legal question that is before the Court.

Compton has created a refuge for the expert whose opinion will fail if subjected to recognized analytical testing methods employed in the field. Faced with the alternatives—the *Daubert* scrutiny verses the *Compton* refuge —experts are encouraged to rely on their expertise and training, rather than subjecting the opinion to the rigors of scientific methodology.

Product liability cases almost always involve expert testimony of an engineering or scientific nature, without which the plaintiff's proof is lacking. These experts have well-defined fields of expertise, employing well-recognized analytical methodology. Courts do a disservice when unreliable "expert" opinion is placed before a lay jury:

> [w]hen an expert merely states an opinion on an ultimate issue without adequately exploring the criteria upon which the opinion is based, the jury is provided with no independent means by which it can reach its own conclusion or give proper weight to the expert testimony.

United States v. Simpson, 7 F.3d 186, 188-89 (10th Cir. 1993).

The demands placed on the jury are heavy enough without imposing the added burden of determining the legal issue of the reliability of evidence; as was stated in

Brown v. Miska, 1995 U.S. Dist. LEXIS 17197 at *11 (S.D. Tex. 1995), *aff'd without op.*, 96 F.3d 1445 (5th Cir. 1996):

> The safety characteristics, design, and manufacture of automobile seatbacks and recliner mechanisms are not subjects with which the ordinary citizens . . . are customarily knowledgeable and familiar. Not surprisingly, defective product cases of this variety cannot reach the jury unless the defect claim is supported by qualified expert testimony.

A. *Compton's* Progeny Promotes Confusion

Compton is not the only lower court demonstrating confusion with respect to the applicability of *Daubert*. *Compton* was followed in *Liriano v. Hobart Corp.*, 1996 U.S. Dist. LEXIS 7727 (S.D.N.Y. 1996), where the court determined that the *Daubert* analysis was inapplicable to the testimony of an expert safety consultant who based his opinion upon his experience and training in the established field of industrial safety. Alternatively, the court noted that there were established safety engineering principles and practices that have been documented in a variety of published studies upon which the expert had drawn for his opinions; thus, even if *Daubert* applied, his testimony was properly admitted. *Id.* at *12 and *12 n.1. Similarly, in *Waitek v. Dalkon Shield Claimants Trust*, 934 F. Supp. 1068, 1087-89 n.10 (N.D. Iowa 1996), the court, citing *Compton*, held that *Daubert* was not applicable to a doctor's opinions that plaintiff's use of the Dalkon Shield had caused her injuries. The court stated that, since the expert's testimony was based upon his experience and training as a gynecologist and doctor generally, and as plaintiff's doctor, and not based on any particular methodology or technique, the question of the doctor's expertise under *Daubert* would be to the weight of the testimony, not its admissibility. *Id. See also Becker v. National Health Prods., Inc.*, 896 F. Supp. 100, 103 (N.D.N.Y. 1995).

Liriano and *Waitek* exemplify the danger of *Compton* if left unchecked; just a few months after the opinion was published, litigants and courts are citing *Compton* for the

proposition that *Daubert* has no application to opinions from experts who employ no testing or methodology in forming their opinions. Had the experts in *Liriano* and *Waitek* subjected their opinions to testing or peer review, or utilized accepted principles related to industrial safety or gynecology in forming their opinions, the opinions may well have been rejected as unsound. Yet the *Compton* standard allows the district court to abandon any further inquiry once a credentialed expert offers his bottom line opinion based on his experience and training, before determining if there are established engineering or scientific methodology in the field and whether the expert's opinion is grounded thereon. "An expert who supplies nothing but a bottom line supplies nothing of value to the judicial process . . . ." *Mid-State Fertilizer Co. v. Exchange National Bank*, 877 F.2d 1333, 1339 (7th Cir. 1989). "But the courtroom is not the place for scientific guesswork, even of the inspired sort. Law lags science; it does not lead it." *Rosen v. Ciba-Geigy Corp.*, 78 F.3d 316, 319 (7th Cir. 1996). The *Compton* standard allows guesswork, as long as the guesser has impressive credentials.

B. There is Sharp Division in the Circuits Regarding the Standards For Admissibility of Expert Opinion

Other circuit courts of appeal have properly applied the *Daubert* decision and would subject engineering testimony to the same scrutiny as any other scientific evidence. In the Sixth Circuit, an expert testifying as to the cause of a plaintiff's injury on a boat dock was excluded under *Daubert*. *Cook v. American S.S. Co.*, 53 F.3d 733 (6th Cir. 1995). The Court concluded that the expert's testimony was *not* based upon any "scientific, technical, or other specialized knowledge" at all, nor was it based on upon any testing. The Court stated: "It is precisely this kind of testimony that the Supreme Court in Daubert admonished federal courts to screen for scientific validity as a part of the courts' 'gatekeeping function.' " *Id.* at 739. In *American & Foreign Ins. Co. v. General Electric Co.*, 45 F.3d 135 (6th Cir. 1995), the testimony of an elec-

trical engineer expert witness regarding the alleged design defect of a circuit breaker was excluded. The Sixth Circuit reiterated *Daubert's* requirement that courts are to determine whether the principles and methodology underlying expert testimony are valid. *Id.* at 138. *See also Berry v. City of Detroit*, 25 F.3d 1342, 1349 (6th Cir. 1994), *cert. denied*, 115 S. Ct. 902, 130 L.Ed. 2d 786 (1995) (*quoting Daubert*, 509 U.S. at 589) (interpreting the *Daubert* standard to "ensure that any and all testimony or evidence admitted is not only relevant, but reliable").

The Sixth Circuit's holding that opinions that are *not* based on any "scientific, technical, or other specialized knowledge" or any testing must be screened for scientific validity is directly contrary to the Tenth Circuit; *Compton* held that opinions need not be screened *because* they are not tested, and allegedly not based on scientific knowledge.

The Seventh Circuit applies *Daubert* to "the application of well-known instruments of the engineering profession to a particular and not-out-of-the-ordinary application." *Cummins v. Lyle Indus.*, 93 F.3d 362, 367-70 (7th Cir. 1996). In *Cummins*, the Court excluded an expert engineer's testimony because, *inter alia*, he had not published any writing or study concerning the incorporation of any alternative designs into an industrial trim press machine, nor had he conducted "any testing to substantiate his opinion that the alternative test designs feasibly could have been incorporated into the Lyle trim press." *Id.* at 369. Similarly, in *Deimer v. Cincinnati Sub-Zero Prods., Inc.*, 58 F.3d 341, 344-45 (7th Cir. 1995), the Seventh Circuit applied the *Daubert* methodology requirements to uphold the exclusion of an expert engineer because the testimony was not "scientific," as the expert "did not conduct any studies or analysis to substantiate his opinion," and "proffered unverified statements that were unsupported by any scientific method." *See also, Rosen, supra*, 78 F.3d at 318-19 (expert cardiologist's testimony excluded because it was based on only "an insightful, even inspired, hunch," not on "any experi-

mental, statistical, or other scientific data" or "real science."); *O'Connor v. Commonwealth Edison Co.*, 13 F.3d 1090, 1106 (7th Cir. 1994) (upholding exclusion of treating physician's testimony that a plaintiff's cataracts were caused by radiation exposure, because the expert's methodology had "no basis in scientific fact."); *Pries v. Honda Motor Co.*, 31 F.3d 543, 545 (7th Cir. 1994) (biomechanical engineering testimony concerning the design of a seat belt latch was excluded because it was not scientific).

The Eighth Circuit very recently explicitly rejected the notion that *Daubert* "applies only to novel scientific evidence" and is therefore "inapplicable to . . . opinions . . . founded on basis engineering principles." *Peitzmeier v. Hennessy Indus., Inc.*, 97 F.3d 293, 297 (8th Cir. 1996). The Court in *Peitzmeier* upheld the exclusion of an engineer's expert testimony because he had not tested for safety or utility his proposed design changes to a tire-changing machine, and thus he had shown "no factual basis to support an opinion that his design changes are feasible or that they would not hinder the efficacy of [the manufacturer's] present tire-changing model." *Id.* In a similar case, *Pestel v. Vermeer Mfg. Co.*, 64 F.3d 382, 384 (8th Cir. 1995), the Eighth Circuit affirmed the district court's refusal, under *Daubert*, to allow testimony from a mechanical engineering expert with respect to his design concept for a safety bar guard for a stump cutter. The Court noted that the expert had not tested his guard, the design was not reliable or relevant because the concept of the guard was still evolving, and the expert had not submitted his concept to any manufacturers, academicians, or engineering professors for scrutiny. *Id.*

The Eighth Circuit cases cited above and the Seventh Circuit's *Cummins* decision are conceptually indistinguishable from this case. All the cases involve engineer experts who opine that a product is defective, and propose alternative designs. The expert in this case, Larry Bihlmeyer, proposed that the roof of an automobile should deform

no more than 2½ inches in rollover accidents occurring at 50 to 70 miles per hour, and involving impact forces of 48,000 to 71,000 pounds; this standard, labeled "preposterous" by the trial court, would require roof resistance to a force of between 20 and 30 times vehicle weight, produring only half the amount of crush that the federal standard permits at 3,600 pounds. Like the experts in *Peitzmeier, Pestel,* and *Cummins,* Bihlmeyer had not tested his theory for feasibility or efficacy (e.g., how would the weight of such a roof affect performance or rollover characteristics of the automobile), nor subjected his theory to any peer review. The Seventh and Eighth Circuits reject such testimony; the Tenth Circuit admits it.

The Fifth Circuit in *Miska, supra,* affirmed the exclusion of an engineering expert from testifying that an automobile seatback was defective. 1995 U.S. Dist. LEXIS 17197 at *11. The court noted that the expert's opinion was based only on his "expert" credentials, his understanding of events surrounding the plaintiff's collision, and his examination of a model automobile seat. The Court held:

> Without any account of [the engineering expert's] intermediate reasoning or methodology, the validity of that reasoning cannot be tested. If a methodology cannot be falsified, refuted, or tested by any objective means, then it is incapable of meeting the "validity" criterion of Daubert because it can never be subjected to the scrutiny that any "valid" methodology must survive.

Id. The court excluded the "subjective" opinion of the expert, and granted summary judgment in the manufacturers' favor. *Miska* was affirmed by the Fifth Circuit. 96 F.3d 1445.

It is not possible to square the holding of *Compton* with *Miska.* Both cases involve engineers testifying to automobile product defect. The experts employed no testing or methodology to their subjective, personal opinions, and thus the manufacturers of the automobiles had

no way to refute the testimony by objective means. Yet the *Compton* and *Miska* courts came to the opposite conclusion. In *Miska* the conclusion of inadmissibility resulted in summary judgment; in *Compton* the opposite conclusion resulted in a substantial plaintiff's verdict.

District courts also have issued opinions involving expert engineers in direct contrast to the *Compton* holding. *See, e.g., Arrendondo v. Uniroyal Goodrich Tire Co.*, 1995 U.S. Dist. LEXIS 19943 (D. Ariz. 1995) (properly credentialed tire failure expert's testimony excluded because it was based solely on his professional experience, and was unsupported by reliable scientific or technical knowledge); *Hopkins v. NCR Corp.*, 1994 U.S. Dist. LEXIS 17273 at *20, 22 (M.D. La. 1994) (court ruled that the factors set out in *Daubert* with respect to "scientific" testimony can be readily adapted to "technical testimony"; court held: "In a case where the expert opinions could be substantiated by scientific or similar methodology, the factors expressed in *Daubert* are particularly relevant to measure the reliability of the expert's testimony"); *Roback v. V.I.P. Transp., Inc.*, 1994 U.S. Dist. LEXIS 14054 (N.D. Ill. 1994) (applying *Daubert* and its factors to engineer who testified that a cruise control malfunctioned); *Stanczyk v. Black & Decker, Inc.*, 836 F. Supp. 565 (N.D. Ill. 1993) (employing *Daubert*'s factors of peer review, publication, testing, potential rate of error, and general acceptance to determine the admissibility of an engineering expert's testimony).

The list of cases supporting application of *Daubert* standards to engineers and other scientific testimony is growing weekly, and only a few are presented here. *Compton* and its progeny are in hopeless conflict with these decisions. Courts and litigants now face the uncertainty whether *Daubert* applies to cases involving applied science. In those lower courts where *Compton* is followed, jurors having no scientific expertise are asked to determine whether engineering or other scientific testimony is reliable enough to be given credence; the court must de-

termine the question of law for them, namely, is the expert testimony reliable? The Court should grant certiorari to resolve the conflict between the courts and to dissuade the inevitable forum shopping that will result from such conflict.

II. RULE 702 AND *DAUBERT* APPLY TO EXPERT TESTIMONY IN A WELL-DEFINED FIELD OF ENDEAVOR ENCOMPASSING RECOGNIZED ANALYTICAL METHODOLOGY OR TECHNIQUES

Compton holds that "application of the Daubert factors is unwarranted in cases where expert testimony is based solely upon experience or training." *Compton* at 1518. Amici disagree; the requirements of both *Daubert* and Rule 702 apply to experts in fields with well-established methodologies and principles.

Compton permits any expert to pass through the gate unchallenged by the gatekeeper if the expert avoids the analysis required by his field of endeavor—claiming his opinion is based on his training and experience, not technical or scientific methodology. *Compton* releases the floodgates for the admission of opinion testimony for which no legitimate foundation exists. "Something doesn't become 'scientific knowledge' just because it's uttered by a scientist; nor can an expert's self-serving assertion that his conclusions were 'derived by the scientific method' be deemed conclusive." *Daubert II*, *supra*, 43 F.3d at 1315-16. On remand in *Daubert*, the 9th Circuit analyzed the testimony of the proposed experts, experts whose impressive credentials were lauded by the Court, and concluded that where they had been presented only with the experts' qualifications, conclusions and assurances of reliability, under *Daubert*, "That's not enough." *Daubert II* at 1319. Yet, under *Compton*, self-validated opinions suffice.[8]

---

[8] Amici do not refer to those situations where personal experience, observations, or training are the only recognized methods and techniques for the expert opinion, but to those defined areas where there are recognized procedures, methods or techniques for use in analysis. *See, e.g., United States v. Muldrow*, 19 F.3d 1332, 1338

A. Rule 702 and *Daubert* Require Scrutiny of the Expert's Methodology

The question that would be answered by the grant of a writ of certiorari is the scope of applicability of *Daubert* and Rule 702 of the Federal Rules of Evidence. The analysis starts with Rule 702, which provides:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

Credentials alone are not and cannot be the ticket for admission of expert evidence. The Rule 702 reliability inquiry does not end with the expert's impressive credentials; it only begins there.

Daubert and Rule 702 have two prongs, which must be satisfied before the court addresses the fit of the opinion. First, the expert's qualifications must be established and, second, there must be an inquiry into what is behind each of the expert's opinions. Any time an expert recites "my opinion is based on my training and experience," the expert self-validates the opinion and seeks to escape objective analysis of its foundation. That assertion cannot be sufficient to establish the evidentiary reliability of expert testimony. Without a *Daubert* analysis, personal opinion, not expert opinion, is being offered. *See Turpin v. Merrell Dow Pharmaceuticals, Inc.*, 959 F.2d 1349, 1360 (6th Cir. 1992). The "knowledge" requirement of Fed. R. Evid. 702 for any kind of expert testimony demands more than subjective belief or unsupported speculation. *Daubert*, 509 U.S. at 590. Personal observations, without more are "not the stuff of expert opinion." *United States v. Rice*, 52 F.3d 843, 847 (10th Cir. 1995).

(10th Cir. 1994), *cert. denied*, 115 S. Ct. 175, 130 L. Ed. 2d 110 (1994) (court used conventional Rule 702 approach with police officer with specialized knowledge of drug trafficking, but the *Daubert* analysis to testimony of forensic chemist.).

Compton failed to apply the second *Daubert* prong, lifted directly from Rule 702, which requires that an expert's testimony "assist the trier of fact to understand or determine a fact in issue." *Daubert*, 509 U.S. at 591. This requires "a preliminary assessment of whether the reasoning or methodology underlying the testimony . . . properly can be applied to the facts at issue." *Id.* Since, in this case, there is no reasoning or methodology underlying Bihlmeyer's testimony, the jury was offered only a personal opinion from the witness. That personal opinion is not reliable, has no relevance and is likely to confuse the jury even if subjected to vigorous cross examination. Improperly applied science is not admissible under *Daubert*'s second prong because it "cannot assist the trier of fact." *United States v. Davis*, 40 F.3d 1069, 1074 n.6 (10th Cir. 1994).

The gatekeeping role of the judge is to guard the jury from considering as proof pure speculation presented in the guise of legitimate scientifically-based expert opinion. *Joiner v. General Electric Co.*, 78 F.3d 524, 530 (11th Cir. 1996). The gate should be shut before the opinion gets to the jury. Cross examination, no matter how skillful, is not a substitute for the court's scrutiny of the reliability of the opinion. Rule 702 and *Daubert* require such scrutiny of scientific evidence offered by experts.

B. *Daubert* Applies to "Scientific, Technical or Other Specialized Knowledge," Which Includes Engineering or Applied Science Expert Opinion

The Tenth Circuit in *Compton* placed Bihlmeyer's testimony beyond the purview of *Daubert* by accepting plaintiff's counsel's argument that such testimony was "non-scientific." 82 F.3d at 1519. The Tenth Circuit attempts to divorce the field of engineering from science, even though engineering is "the application of mathematical and scientific principles to practical ends, as the design, construction, and operation of economical and efficient structures, equipment, and systems." *Webster's II New College Dictionary*, 1995. Similarly, courts have defined

engineering to be the "art and science by which the mechanical properties of matter [or energy] are made useful to man in structures and machines." *Camp Dresser & McKee, Inc. v. Home Ins. Co.*, 568 N.E.2d 631, 635 (Mass. App. 1991). Kansas, the state in which the engineer expert in this case testified, defines "professional engineer" as:

> a person who is qualified to practice engineering by reason of special knowledge and use of the mathematical, physical and engineering sciences and the principles and methods of engineering analysis and design . . ..

K.S.A. § 74-7003(h). Thus, engineering evidence cannot be "non-scientific." No valid engineering opinion can be expressed that does not have the physical sciences as its basis. Any engineering opinion, even if based in part on training and expertise, should utilize valid engineering principles and methodology; the engineer cannot divorce science and banish it from the field.

Respondent admits the scientific nature of Bihlmeyer's opinion in his Opposition Brief, stating: "Much of Bihlmeyer's knowledge is based on scientific principles (force dynamics, strength analysis, strength of materials) . . .." *See* Respondent's Opposition Brief, p. 17.

Even those cases that apply *Daubert* only to "scientific" opinion would apply the analysis to Bihlmeyer's testimony, since scientific opinion is involved. However, even if the court had been correct in defining Bihlmeyer's testimony as "nonscientific," *Daubert* does not grant a waiver of scrutiny or apply a lesser reliability standard to the testimony of experts having technical or other specialized knowledge:

> . . . Rule 702 . . . clearly contemplates some degree of regulation of the subjects and theories about which an expert may testify. *"If scientific,* technical, or other specialized *knowledge will assist the trier of fact* to understand the evidence or to determine a fact in issue" an expert "may testify *thereto."* The subject of an expert's testimony must be "scientific

> . . . knowledge." n.8. The adjective "scientific" implies a grounding in the methods and procedures of science. Similarly, the word "knowledge" connotes more than subjective belief or unsupported speculation. The term "applies to any body of known facts or to any body of ideas inferred from such facts or accepted as truths on good grounds." *Webster's Third New International Dictionary*, p. 1252 (1986).

Daubert, 509 U.S. at 589-90 (emphasis in original). Thus, this Court makes clear that the words "scientific, technical, or other specialized" are adjectives that modify the word "knowledge." The Court noted that the word "knowledge" connotes "more than subjective belief or unsupported speculation."

Daubert provides no justification for treating technical knowledge differently than scientific knowledge, a point made clear by Footnote 8:

> Rule 702 also applies to "technical, or other specialized knowledge." Our discussion is limited to the scientific context because that is the nature of the expertise offered here.

Daubert, supra, 509 U.S. at 590 n.8. That the court discussed methodology and technique in the context of "scientific knowledge" does not mean that experts having "technical, or other specialized knowledge" can avoid the *Daubert* requirements of "appropriate validation," i.e., "good grounds," by relying on training and experience to support their opinion. *See Daubert*, 509 U.S. at 590. Indeed, the Court's defining the word "knowledge" as requiring more than subjective belief or unsupported speculation indicates an intent to require that all experts having scientific, technical, or other specialized knowledge meet the *Daubert* requirements. *Daubert* interpreted Rule 702 as it would any other piece of legislation. *See id.* at 588-91. To separate out one adjective from two other modifiers of the word "knowledge" and give that type of testimony special treatment defies every standard of legislative interpretation.

Courts other than *Compton* have acknowledged that the scope of Rule 702 and *Daubert* extends beyond "scientific knowledge." In *United States v. Rincon*, 28 F.3d 921, 923 n.3 (9th Cir. 1994), *cert. denied*, 155 S. Ct. 605, 130 L.Ed 2d 516 (1994), the Ninth Circuit applied both prongs of *Daubert* to an expert in eyewitness identification, stating: "Thus, as in Daubert, . . . we limit our discussion to the 'scientific knowledge' aspect of Rule 702, *even though that rule also applies to 'technical, or other specialized knowledge.'*" (emphasis added.) In *Fellner v. Supreme Corp.*, 1995 U.S. Dist. LEXIS 2166 (D. N.J. 1995), which involved an engineering expert who testified as to the design of a truck body, the court cited *Daubert* for the proposition that courts have a duty to make a factual inquiry as to whether the facts and data relied on by experts are reliable "regardless of whether the expert testimony is scientific or technical." Id. at *12 n.1. *See also, Ohio ex rel. Montgomery v. Louis Trauth Dairy, Inc.*, 1996 U.S. Dist. LEXIS 6667 at *14 (S.D. Ohio 1996) ("Although the proffered experts' testimony may not qualify as 'scientific knowledge,' the reasoning of Daubert still applies.")

C. Credentials and a "Logical Basis" Are Not Enough to Satisfy *Daubert*

Compton encourages a party to hire an expert witness with good credentials and to extract personal opinion from the expert, thus lowering the admissibility hurdle. Credentials alone are not enough to satisfy *Daubert*. A court "asked to admit scientific evidence must determine whether the evidence is genuinely scientific, as distinct from being unscientific speculation offered by a genuine scientist." *Rosen, supra*, 78 F.3d at 318. "Rule 702 is designed to ensure that, when expert witnesses testify in court, they adhere to the same standards of intellectual rigor that are demanded in their professional work." *Cummins, supra*, 93 F.3d at 369; *Rosen, supra*, 78 F.3d at 318-19. "If they do, their evidence, if relevant, is admissible, even if the particular methods they have used in arriving at their opinion are not yet accepted as canonical in their branch

of the scientific community. If they do not, their evidence is inadmissible no matter how imposing their credentials." *Id.*

Compton contradicts *Daubert* when it approved of a pre-*Daubert* case, *Jones v. Otis Elevator Co.*, 861 F.2d 655, 663 (11th Cir. 1988), for the proposition that "as long as a logical basis exists for an expert's opinion . . . the weaknesses in the underpinnings of the opinion go to the weight and not the admissibility of the testimony." Logical reasoning may produce a testable hypothesis, but it cannot supplant the methodology employed by the field to test the hypothesis. Under *Daubert*, a "logical basis" is insufficient if it is based on "subjective belief or unsupported speculation." 509 U.S. at 590. To be admissible, an opinion must have more for its basis than the experience and training of an expert; if it be engineering testimony, it must be grounded in the recognized methods and principles of engineering. Otherwise, the "knowledge" imparted to the jury is nothing more than unsubstantiated personal opinion.

Even before *Daubert* it was not sufficient for an expert merely to show that a logical basis exists for an expert's opinions. *See, e.g., DeLuca v. Merrell Dow Pharmaceuticals Inc.*, 911 F.2d 941, 944 (3d Cir. 1990), *on remand*, 791 F. Supp. 1042 (D.N.J. 1992), *aff'd without op.*, 6 F.3d 778 (3d Cir. 1993) (court concluded expert's methodology so unreliable as to warrant exclusion). Something may appear logical but not be supported by good science or good engineering. The fallacy of the apparently logical opinion may not surface if the expert is not required to base the opinion on sound methodology in the applicable field. To give *Daubert* its due, the failure to utilize any technological methodology requires more extensive scrutiny of the expert's testimony, not less.

D. *Compton*'s Relinquishment of Trial Courts' Gatekeeper Role Encourages Unreliable Expert Testimony

The end result of the Tenth Circuit's decision in *Compton* is that a qualified engineering expert who employs no

engineering reasoning or methodology, and merely expresses his personal opinion, can testify to any opinion he pleases. *Compton* cloaks an expert witness with apparent authority simply by virtue of his expertise. It allows an expert to testify to his opinion without any demonstration that a reliable method has been used and that the method has been faithfully followed by the expert. As demonstrated above, the commandments of both *Daubert* and Rule 702 forbid an expert in the applied sciences from abandoning any pretense of establishing the reliability of his opinion.

Society is not served by the *Compton* standard of admissibility and the judgments resulting from it:

> [T]wo of the primary rationales behind products liability are to provide deserving compensation for the injured party when the defendant is at fault and to deter further misconduct. However, neither of these policy goals are served when counsel and the courts allow an unmerited expert opinion to "speak by" them. The primary rationales of deserved compensation and deterrence are then frustrated since true "fault" is not really established and there is no real misconduct to deter in the future. When shallow expertise is at the core of a finding of liability, the system has merely created a "coin-flipping" aberration.

Michael Hoenig, *Drawing the Line On Expert Opinions*, NYDJ, p.1 (May 22, 1985). "The too-frequent surfacing of the ubiquitous journeyman expert who will fashion his credentials as well as his conclusions 'to fit the crime' is lamentably predictive of a superficial conclusion." W. Donaher, H. Piehler, A. Twerski & A. Weinstein, *The Technological Expert in Products Liability Litigation*, 52 Tex. L. Rev. 1303, 1311-12 (1974).

CONCLUSION

The *Compton* decision's misunderstanding of *Daubert* is likely to cause confusion among trial courts, jurors and litigants. The standard of analysis to be applied to expert opinion is an issue facing courts on a daily basis. There is a sharp division among the lower courts regarding the proper standard for the admission of expert testimony in cases involving applied science, technical, or other specialized knowledge. The facts of *Compton* will allow the Court to give much needed guidance on the issue of the applicability of *Daubert* to areas of endeavor outside of "pure" science. The Court should accept Petitioners' Petition for a Writ of Certiorari, to resolve the sharp division among the courts.

Respectfully submitted,

Of Counsel

HUGH F. YOUNG, JR.
PRODUCT LIABILITY ADVISORY COUNSEL, INC.
1850 Centennial Park Drive
Suite 510
Reston, VA 22091
(703) 264-5300

JAN S. AMUNDSON
General Counsel
QUENTIN RIEGEL
Deputy General Counsel
NATIONAL ASSOCIATION OF MANUFACTURERS
1331 Pennsylvania Ave. N.W.
Suite 1500—North Lobby
Washington, D.C. 20004-1790
(202) 637-3000

MARY A. WELLS
Counsel of Record
SUANNE M. DELL
GREGORY E. SOPKIN
WELLS, ANDERSON & RACE LLC
1700 Broadway, Suite 1850
Denver, CO 80290
(303) 830-1212

APPENDIX

APPENDIX

CORPORATE MEMBERS OF THE PRODUCT LIABILITY COUNSEL

3M
ACRISON, INC.
Allegiance Healthcare Corporation
AlliedSignal, Inc.
Aluminum Company of America
American Automobile Manufacturers Assn.
American Brands, Inc.
American Home Products Corporation
American Suzuki Motor Corporation
Andersen Corporation
Anheuser-Busch Companies
AT&T/Lucent Technologies Inc.
Atlantic Richfield Company
Baxter International, Inc.
Bayer Corporation
Becton-Dickinson & Company
Beech Aircraft Corporation
BIC Corporation
Black & Decker (U.S.) Inc.
BMW of North America, Inc.
Boeing Company, The
Bridgestone/Firestone, Inc.
Briggs & Stratton
Bristol-Myers Squibb Company
Brown-Forman Corporation
Budd Company, The
C.R. Bard, Inc.
Case Corporation
Caterpillar, Inc.
CBI Industries, Inc.
Chrysler Corporation
Ciba-Geigy Corporation
Clark Material Handling Company
Coca-Cola Company
Coleman Company, Inc., The
Continental General Tire, Inc.
Coors Brewing Company
Corning Incorporated
Dana Corporation
Deere & Company
Dow Chemical Company, The
Eaton Corporation
Eli Lilly and Company
Emerson Electric Co.
Estee Lauder Companies
Exxon Corporation
Federal-Mogul Corporation
FMC Corporation
Ford Motor Company
Freightliner Corporation
Gates Rubber Company, The
General Electric Company

General Motors Corporation
Glaxo Wellcome Co.
Goodyear Tire & Rubber Company, The
Great Dane Trailers, Inc.
Guidant Corporation
H.B. Fuller Company
Harnischfeger Industries
Hocchst Celanese Chemical Group, Inc.
Hocchst Marion Roussel, Inc.
Honda North America, Inc.
Hyundai Motor America
International Paper Company
Isuzu Motors America, Inc.
Johnson Controls, Inc.
Kaiser Aluminum & Chemical Corp.
Kawasaki Motors Corp., U.S.A.
Kia Motors America, Inc.
Kraft Foods, Inc.
Lorillard Tobacco Company
Mack Trucks, Inc.
Mazda (North America), Inc.
Medtronic, Inc.
Melroe Company
Mercedes-Benz of N. America, Inc.
Michelin North America, Inc.
Miller Brewing Company
Mitsubishi Motor Sales of America, Inc.
Monsanto Company
Navistar International Transportation Corp.
Nissan North America, Inc.
O.F. Mossberg & Sons, Inc.
Otis Elevator Co.
Owens-Corning Fiberglas Corporation
PACCAR Inc.
Panasonic Company
Pentair, Inc.
Pfizer Inc.
Pharmacia and Upjohn, Inc.
Philip Morris Companies, Inc.
Playtex Products Inc.
Porsche Cars North America, Inc.
Procter & Gamble Co., The
Raymond Corporation, The
RJ Reynolds Tobacco Company
Rockwell International Corporation
Rover Group, Ltd.
Schindler Elevator Corp.
Sears, Roebuck and Company
Sherwood, a Division of Harsco Corp.
Simon Access-North America
Smith & Nephew Richards, Inc.
Snap-on Incorporated
Sofamor Danek Group, Inc.
State Industries, Inc.
Sturm, Ruger & Co., Inc.

Subaru of America
Thomas Built Buses, Inc.
Toro Company, The
Toyota Motor Sales, USA, Inc.
TRW Inc.
UST (U.S. Tobacco)
Volkswagen of America, Inc.
Volvo Cars of North America, Inc.
Vulcan Materials Company
Whirlpool Corporation
Yamaha Motor Corporation, U.S.A.

(5)

Supreme Court, U.S.
FILED
NOV 27 1996
CLERK

No. 96-645

In the Supreme Court of the United States

OCTOBER TERM, 1996

SUBARU OF AMERICA, INC., AND
FUJI HEAVY INDUSTRIES, INC., PETITIONERS

v.

STEVEN D. COMPTON, RESPONDENT

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Tenth Circuit

REPLY BRIEF FOR PETITIONER

RICHARD C. HITE
SCOTT J. GUNDERSON
Kahrs, Nelson, Fanning Hite & Kellogg
200 West Douglas
Wichita, KS 67202
(316) 265-7761

JOSEPH J. KUTER
Senior Counsel
Subaru of America, Inc.
Subaru Plaza
2235 Route 70 West
Cherry Hill, NJ 08034
(609) 488-8572

KENNETH S. GELLER
Counsel of Record
STEPHEN M. SHAPIRO
ALAN E. UNTEREINER
Mayer, Brown & Platt
2000 Pennsylvania Ave., N.W.
Washington, D.C. 20006
(202) 463-2000

14pp

TABLE OF CONTENTS

Page

TABLE OF AUTHORITIES i

CONCLUSION 11

TABLE OF AUTHORITIES

Page

Cases:

Brown v. *Miska*, 1995 U.S. Dist. LEXIS 17197 (S.D. Tex. July 19, 1995), aff'd, 96 F.3d 1445 (5th Cir. 1996) 4

Carroll v. *Morgan*, 17 F.3d 787 (5th Cir. 1994) 3

Cavallo v. *Star Enterprise*, 1996 U.S. App. LEXIS 30033 (4th Cir. Nov. 20, 1996) 3

Cummins v. *Lyle Indus.*, 93 F.3d 362 (7th Cir. 1996) 5, 6

Daubert v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) . . . . . *passim*

Deimer v. *Cincinnati Sub-Zero Products, Inc.*, 58 F.3d 341 (7th Cir. 1995) 2

Holbrook v. *Lykes Bros. S.S. Co.*, 80 F.3d 777 (3d Cir. 1996) 2, 3

O'Conner v. *Commonwealth Edison Co.*, 13 F.3d 1090 (7th Cir.), cert. denied, 114 S. Ct. 2711 (1994) 2, 3

Peitzmeier v. *Hennessy Indus., Inc.*, 97 F.3d 293 (8th Cir. 1996) 5, 6

Rosen v. *Ciba-Geigy Corp.*, 78 F.3d 316 (7th Cir.), cert. denied, 1996 U.S. LEXIS 4783 (1996) 2, 3

Thomas v. *Newton Int'l Enterprises*, 42 F.3d 1266 (9th Cir. 1994) 4

Vadala v. *Teledyne Indus.*, 44 F.3d 36 (1st Cir. 1995) 4

Rules:

Fed. R. Evid. 702 . . . . . *passim*

Fed. R. Civ. P. 50 6

Miscellaneous:

C.W. Griffin, *Viewpoint: Ban Junk Science From The Courts*, 237 ENGINEERING-NEWS RECORD 89 (Oct. 21, 1996) 10

Plaintiff, Defense Lawyers Battle Over Application of Daubert in Implant Cases, 4 MEALEY'S LITIGATION REPORT: BREAST IMPLANTS 6 (Oct. 10, 1996) 3

MEALEY'S DAUBERT REPORT (Oct. 1996) 10

REPLY BRIEF FOR PETITIONER

Respondent's brief is notable for what it does *not* say. First, respondent does not deny the enormous practical significance of the questions presented. Second, he does not dispute that there is substantial confusion in the lower courts on how to apply the mandate of *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), to expert engineering testimony. And third, although respondent devotes most of his argument to contending that the result below is correct (Opp. 11-19), he makes no effort to defend the Tenth Circuit's essential holding: that the trial court's "gatekeeper" responsibilities under *Daubert* may be bypassed altogether if an expert proposes to rely on his "training" or "experience" rather than on any "technique" or "methodology" of his discipline.

Instead of disputing these reasons why review should be granted, or defending the Tenth Circuit's reasoning, respondent seeks to persuade the Court that this case is a poor vehicle to resolve the certworthy issues identified in the petition. Thus, respondent maintains that the Tenth Circuit did not mean what it said; that the issue presented here is "factbound"; that the district court in actuality applied the *Daubert* factors in ruling on the admissibility of Bihlmeyer's testimony; and that the court of appeals' disposition is correct because engineering testimony is not rooted in "scientific knowledge" and therefore not subject to review under *any* of the reliability criteria identified in *Daubert*. Respondent's strained efforts to rewrite the lower courts' opinions, and to explain away the serious intercircuit conflicts (Pet. 11-21), are unpersuasive. Further review is plainly warranted.[1]

1. Without denying the widespread confusion in the lower courts, respondent maintains (Opp. 21-26) that there is no

---

[1] Much of respondent's brief is devoted to matters that are largely irrelevant to the issues presented in this case, such as Bihlmeyer's *qualifications* (as opposed to the *methodology* underlying Bihlmeyer's "engineering analysis" (Opp. 19)), the qualifications of *petitioners'* engineering expert (the admissibility of whose testimony respondent never challenged at trial), and an aspect of this Court's decision in *Daubert* (rejection of the *Frye* test) that is not directly implicated here. See Opp. 2-4, 5 n.5, 11, 14, 18 nn.9-10, 19.

intercircuit conflict. But the petition identified three distinct areas in which conflicts have developed in the courts of appeals on issues that are relevant to the questions presented in this case.

First, we explained (Pet. 14-16) that the decision below is inconsistent with at least three decisions of the Seventh Circuit, which hold that expert scientific testimony that would otherwise be subject to the *Daubert* framework may not avoid such scrutiny merely because the expert purports to rely on "experience" or "observation" rather than on the pertinent scientific methodology. See Pet. 14-15 & n.4. *Second*, we identified a deep conflict in the treatment of expert *engineering* testimony: the Second and Tenth Circuits have refused to apply the *Daubert* framework and factors to such testimony, whereas the Seventh and Eighth Circuits have strictly applied *Daubert* to expert engineers. Pet. 16-19 & nn.5-6. *Third*, we explained that the "Tenth Circuit's substantial reliance * * * on Bihlmeyer's experience" as an expert witness is "in significant conflict with the approach of other circuits," including the Fourth and Eighth Circuits (and, to a lesser extent, the Seventh and Ninth Circuits). Pet. 20-21.

Notably, respondent makes no effort to deny the existence of the third conflict. Instead, he focuses on the first two areas of conflict, which he lumps together. See Opp. 21-24. With regard to the first area (bypass of *Daubert* where an expert bases testimony on "experience" or "training"), respondent does not dispute that the Tenth Circuit's opinion is in direct conflict with the Seventh Circuit decisions in *O'Conner*, *Rosen*, and *Deimer*. See Pet. 14-15. Instead, respondent maintains that the conflict is *even deeper* because the Third, Fifth, and Ninth Circuits have all agreed with the Tenth Circuit on this point. The cases cited by respondent, however, do not support even that limited claim.

Contrary to respondent's contention (Opp. 23), *Holbrook* v. *Lykes Bros. S.S. Co.*, 80 F.3d 777 (3d Cir. 1996), does not stand for the proposition that an expert physician testifying on an issue of medical causation need not adhere to the rigorous methods and techniques of his scientific discipline. Rather, the Third Circuit in *Holbrook* affirmed the trial court's decision to admit the testimony because, "[a]s required by *Daubert*," the experts in question employed "procedures for examining the facts presented to them and * * * research methodologies" that were "based on the

methods of science." *Id.* at 785. Thus, *Holbrook* is fully consistent with the Seventh Circuit's decisions in *O'Conner* and *Rosen* concerning medical causation testimony. See also *Cavallo* v. *Star Enterprise*, 1996 U.S. App. LEXIS 30033, at *26 (4th Cir. Nov. 20, 1996) (in upholding exclusion of testimony of two toxicologists, explaining that *Daubert* "require[s] that the methodology and reasoning used by a witness have a significant place in the discourse of experts in the field").[2]

Respondent also contends that in another case involving a medical expert, the Fifth Circuit adopted an approach similar to the Tenth Circuit's. Opp. 23-24 (citing *Carroll* v. *Morgan*, 17 F.3d 787 (5th Cir. 1994)). In affirming the district court's decision to admit this testimony, however, the Fifth Circuit in *Carroll* explained that the experts' testimony was fully "ground[ed] in the methods and procedures of science." 17 F.3d at 790 (internal quotations omitted). That analysis is completely inconsistent with the Tenth Circuit's pointed *refusal* to evaluate whether Bihlmeyer's testimony was grounded in the methods and procedures of engineering science.

Indeed, as the *amici* point out (Brief for the Chemical Manufacturers Association and the Chamber of Commerce of the United States of America As *Amici Curiae* ("CMA/Chamber Br.") 6-7; Brief of the Product Liability Advisory Council, Inc., and National Association of Manufacturers As *Amici Curiae* ("PLAC/NAM Br.") 6, 10), the Fifth Circuit has in fact *rejected* the mode of analysis used by the Tenth Circuit in this case — and done so in a product liability action involving an engineering expert. As noted in the petition (at 15 n.4), a district court in the

---

[2] Respondent is correct, however, in recognizing that the Tenth Circuit's reasoning could be invoked to evade the requirements of *Daubert* in cases involving questions of medical causation — a point that has not been lost on the plaintiffs' bar. See *Plaintiff, Defense Lawyers Battle Over Application of Daubert in Implant Cases*, 4 MEALEY'S LITIGATION REPORT: BREAST IMPLANTS 6 (Oct. 10, 1996) (summarizing argument advanced by plaintiff's lawyer at annual breast implant conference that, in light of "the 10th Circuit U.S. Court of Appeals' recent decision in Compton v. Subaru," *Daubert* "has no application to causation opinions by a patient's treating physician").

Fifth Circuit applied the *Daubert* factors and framework to evaluate the admissibility of engineering testimony concerning whether an automobile seatback was defectively designed. In a decision recently affirmed by the Fifth Circuit, the district court refused to admit the testimony because it failed to "reflect the application of any particular methodology." *Brown* v. *Miska*, 1995 U.S. Dist. LEXIS 17197, at *11 (S.D. Tex. July 19, 1995), aff'd, 96 F.3d 1445 (5th Cir. Aug. 29, 1996) (table). Thus, the Fifth Circuit has sided with the Seventh Circuit and against the Tenth Circuit in this debate.[3]

Respondent is equally unsuccessful in his attempts to explain away the extensive intercircuit conflict (see Pet. 16-19 & nn. 5-6) in the *second* area — the approach taken by courts to the admissibility of expert engineering testimony. See also PLAC/NAM Br. 7-12; CMA/Chamber Br. 9-14. Respondent agrees that the Second Circuit, like the Tenth Circuit, refuses to apply the *Daubert* framework to engineering testimony. Opp. 21-22. He argues, moreover, that the First Circuit falls into this camp as well. See *id.* at 21 (citing *Vadala* v. *Teledyne Indus.*, 44 F.3d 36 (1st Cir. 1995)). Respondent misreads *Vadala*, which says only that *Daubert*'s rejection of the *Frye* test has no application to a case "in which the dispute concerns an event rather than a scientific law." 44 F.3d at 39. The First Circuit affirmed the trial court's exclusion of the expert testimony on the ground that it lacked sufficient "fit" under *Daubert*. *Ibid.*

Finally, respondent argues that the Seventh and Eighth Circuit cases we cite as stringently applying *Daubert* to engineering testimony are "either distinguishable or reconcilable as depending on the facts and involving the application of an abuse of discretion

---

[3] Contrary to respondent's assertion, the Ninth Circuit in *Thomas* v. *Newton Int'l Enterprises*, 42 F.3d 1266 (1994), did not permit an expert to forgo reliance on the traditional methods and techniques of a scientific discipline (such as engineering) and to rely instead solely upon his "experience" or "observation." The expert in *Thomas* had no such discipline to abandon. And in any event, the kind of direct factual observations at issue in *Thomas* are hardly comparable to the "engineering analysis" (Opp. 4, 10, 19) and judgments at issue in this case. See PLAC/NAM Br. 12 n.3; CMA/Chamber Br. 13-14.

standard of review." Opp. 24; see *id.* at 24-26. That argument is also incorrect. In *Cummins* v. *Lyle Indus.*, 93 F.3d 362 (7th Cir. 1996), for example, the Seventh Circuit stated that is was reviewing "de novo * * * whether the district court properly followed the analytical framework established in *Daubert*." *Id.* at 367. The court went on to explain its legal conclusions that engineering testimony pertains to scientific knowledge within the meaning of *Daubert* and that the admissibility of such testimony must be evaluated under the *Daubert* factors. *Id.* at 367-68 & n.2. In like fashion, the Eighth Circuit in *Peitzmeier* v. *Hennessy Indus., Inc.*, 97 F.3d 293 (1996), resolved *de novo* the "threshold" legal question of whether the *Daubert* factors apply to engineering testimony or only to "novel scientific testimony." *Id.* at 297. Respondent's attempts to explain away the conflict between these decisions and the decision below are therefore wholly unavailing.

2. Unable credibly to deny that the lower courts have provided sharply divergent answers to the important and recurring issues identified in the petition, respondent resorts to a scattershot of arguments designed to persuade the Court that this case is a poor vehicle to resolve those issues.

a. Respondent first maintains that review should be denied because this case presents only the "factbound" issue of whether the district court "abused its discretion" in admitting Bihlmeyer's testimony. Opp. 9-10, 17-19; see also *id.* at i. That argument is meritless.

In explaining the standard of review applicable to rulings on the admissibility of expert testimony, the Tenth Circuit stated that threshold issues concerning *Daubert*'s "relevance" and "applicability" — including the question "whether the district court properly followed the framework set forth in *Daubert*" — are "question[s] of law which this court reviews **de novo**." Pet. App. 6a (emphasis in original) (internal quotations omitted). Accord Compton C.A. Br. 17 ("The appellate court conducts a de novo review of whether the district court properly followed the framework set forth in *Daubert*[ ]."). The court of appeals added that "once we determine *Daubert*'s relevance and application, our review of the district court's decision to admit expert testimony is * * * for abuse of discretion." Pet. App. 6a.

As we have explained (Pet. 7-8, 11-12, 14), the Tenth Circuit decided this case by holding that the "new framework" announced in *Daubert* is "*applicable only* when a proffered expert relies on *some principle or methodology*," and not when "expert testimony is based solely upon *experience or training*." Pet. App. 7a, 8a (emphasis added). That holding resolves a purely legal question concerning *Daubert*'s "relevance" or "applicability" — a question that is reviewable *de novo*. The panel did not even remotely suggest that, in deciding this legal issue, it was deferring to the discretion of the district court. On the contrary, the panel observed that it was free to affirm the district court "on any grounds for which there is a record sufficient to permit *conclusions of law*." Pet. App. 9a n.3 (emphasis added) (internal quotations omitted). That statement soundly refutes respondent's claim. See also PLAC/NAM Br. 5.

Respondent also argues that the proper characterization of Bihlmeyer's engineering testimony under Rule 702 (as rooted in "technical" rather than "scientific" knowledge) represents a "factual finding" made by the district court. Opp. 9. This argument rests on a mistaken premise. During the hearing on admissibility, the district court stated that "clearly there's some scientific knowledge involved in the testimony of Mr. Bihlmeyer." Pet. App. 25a; cf. *id.* at 17a ("*Viewed most favorably to plaintiff*, Bihlmeyer did not offer any 'scientific' opinions.") (ruling on Rule 50 motion). In any event, respondent offers no reason to believe that the Tenth Circuit — like other appellate courts — would treat the characterization issue as anything other than a question concerning *Daubert*'s "applicability" that is reviewable *de novo*. See *Peitzmeier*, 97 F.3d at 297; *Cummins*, 93 F.3d at 367 n.2. See also PLAC/NAM Br. 14-15.

b. Next, respondent maintains that the Tenth Circuit's decision did not rest on an outright refusal to apply *Daubert* but rather on a more limited refusal to apply the *Daubert* factors. According to respondent, the Tenth Circuit (1) "held that * * * Bihlmeyer's testimony met the Rule 702 criteria of relevance and reliability" but (2) "determined that in the absence of *scientific* testimony presenting *some novel principle or methodology*, use of the * * * *Daubert* factors is unwarranted." Opp. 16 (emphasis added). This argument for denying review should also be rejected.

Contrary to respondent's assertion, neither the Tenth Circuit nor the district court actually evaluated Bihlmeyer's testimony for evidentiary reliability, as respondent now concedes *Daubert* requires. See Opp. 13. The Tenth Circuit merely applied its pre-*Daubert* case law, which the court regarded as unaffected by *Daubert* in a case of this kind. See Pet. App. 6a-8a. As the panel explained, under the Tenth Circuit's pre-*Daubert* cases, "as long as a *logical basis* exists for an expert's opinion . . . the weaknesses in the underpinnings of the opinion[ ] go to the weight and not the admissibility of the testimony." *Id.* at 6a (internal quotations omitted) (emphasis added). The district court, the panel explained, fulfilled its obligations under Rule 702 and *Daubert* by determining that Bihlmeyer's testimony was "facially helpful." *Id.* at 9a.

As the district court candidly acknowledged, the Tenth Circuit's pre-*Daubert* approach is one of "*extreme liberality* with respect to admissibility of expert testimony in product liability cases." Pet. App. 25a (emphasis added). That approach simply fails to discharge the gatekeeping responsibilities mandated by *Daubert*. It is one thing to determine whether an expert's testimony rests upon a "reliable basis in the knowledge and experience of [the expert's] discipline." *Daubert*, 509 U.S. at 592. It is quite another merely to ask whether expert testimony is "facially helpful" or rests on some "logical basis." Testimony that appears to have a logical basis or that is facially helpful may nevertheless be methodologically unsound or improperly premised upon "subjective belief or unsupported speculation." *Id.* at 590. See PLAC/NAM Br. 17-18. The panel was mistaken in concluding that it could continue to apply such an approach after *Daubert*.

Equally mistaken is respondent's contention that the Tenth Circuit's decision rested on a determination that the *Daubert* factors were inapplicable because engineering testimony is "nonscientific" in nature. Although in the Tenth Circuit respondent "characterize[d] Mr. Bihlmeyer's testimony as nonscientific and argue[d] [that] *Daubert* is inapplicable to such evidence," the court of appeals expressly stated that it was "unnecessary to reach" that question. Pet. App. 9a; see *id.* at 2a n.1. "Absent some particular methodology or technique," the court stated, "*Daubert*

simply has little bearing on Mr. Bihlmeyer's testimony." *Id.* at 9a.[4]

Although the Tenth Circuit did not resolve the question whether *Daubert* applies to nonscientific expert testimony, respondent's brief signals his clear intention, if review is granted, to argue for affirmance on this basis (as well as to argue that engineering testimony is "technical" rather than "scientific" within the meaning of Rule 702). See Opp. 13, 16-17. The presence of these issues further enhances the certworthiness of this case. It is now clear that, if review is granted, the Court will be called upon to decide three issues that are fairly encompassed within the questions presented: (1) May the requirements of *Daubert* be bypassed altogether where an expert proposes to rely not on any method or technique utilized in his area of expertise but rather on his "experience" or "training"? (2) Do the *Daubert* factors apply exclusively to expert testimony that is based on "scientific" knowledge (and not, in whole or in part, to testimony based on technical or other specialized knowledge)? and (3) If the answer to the second question is yes, is engineering testimony "scientific" under Rule 702? The latter two questions have also engendered conflicts in the circuits and are plainly worthy of this Court's review. See Pet. 16 n.5, 17-19.

c. Respondent next argues (Opp. 20) that the district court *in fact* "applied *Daubert* but concluded that most of the *Daubert* factors did not support the exclusion of Bihlmeyer's testimony." That is a misreading of the district court's opinion.

It is true that the district court stated, in denying petitioners' post-trial motion for judgment as a matter or law, that "to the extent *Daubert* is applicable to Bihlmeyer's opinions, the *Daubert* requirements are satisfied." Pet. App. 19a. It made that state-

---

[4] Just as respondent declines to defend the Tenth Circuit's actual holding, he provides no response to our argument that the specific factors articulated in *Daubert* for assessing reliability apply to *all* expert testimony that is based on "scientific" knowledge. Instead, respondent rebuts an argument we never made: that every one of the *Daubert* factors must be rigidly applied, without modification, to "*all* scientific, *technical and other specialized expertise*." Opp. 17 (emphasis added).

ment, however, only after determining that *none of the Daubert factors applied to engineering testimony such as Bihlmeyer's*. Thus, after summarizing the four factors identified in *Daubert*, the district court explained that "[t]hree of these factors have *no logical application* to Bihlmeyer's opinions." *Id.* at 18a (emphasis added). The court then noted that the fourth *Daubert* factor — testing — "arguably has some application," because Bihlmeyer had failed to test "the roof crush 'standard'" he proposed. *Ibid.*[5] In the end, however, the district court concluded that to apply this factor would be to improperly "focus[ ] on Bihlmeyer's *conclusions* rather than on the *methodology* he used to reach them," contrary to this Court's teaching in *Daubert*. *Ibid.* (emphasis added). In short, the district court "applied" the *Daubert* factors by concluding that three were "logically" inapplicable and the fourth could not be applied without running afoul of *Daubert* itself.

3. Once respondent's defective arguments are set to one side, it is clear that review should be granted. Again, respondent does not seriously dispute — nor could he — that the issues presented in this case are of "vital significance." Pet. 27. See also CMA/Chamber Br. 3, 17. In fact, by signaling his clear intention to argue that the decision below is correct on the alternative grounds, respondent has only enhanced the attractiveness of this case as a vehicle for clarifying this important area of federal law. See page 8, *supra*.[6]

---

[5] Respondent quotes the district court as stating that "'there was no testimony that testing is an essential element in the methodology of development of engineering opinions.'" Opp. 24 n.12 (quoting Pet. App. 18a). As explained in our petition, however, Bihlmeyer himself gave just such testimony. Pet. 5 (citing record).

[6] Respondent states that this Court has "repeatedly declined to review post-*Daubert* challenges to the lower federal courts' decisions regarding the admissibility of expert testimony." Opp. 19; see also *id.* at 19-20 n.11. In many of the cases cited by respondent, however, the certiorari petitions did not present any question concerning the admissibility of expert testimony or the meaning of *Daubert*. The remaining petitions either presented *Daubert* issues quite different from those raised here or were filed before the emergence of a clear conflict at the appellate level.

Nor can it be doubted that the issues raised in this case arise with great frequency. Respondent does not deny that in the three years since *Daubert* was decided, the case has been cited hundreds and hundreds of times by the lower federal courts, that recent statistics show that almost 40,000 new product liability actions are filed in the federal courts each year, or that in "[m]any if not most" of these cases engineers are called as experts to give testimony concerning product design. Pet. 27, 29; see also PLAC/NAM Br. 2, 5-6; CMA/Chamber Br. 16 n.7; MEALEY'S DAUBERT REPORT (Oct. 1996) (publication devoted to tracking post-*Daubert* cases). The recurring nature of the issues presented is accordingly clear.

Finally, it should not be forgotten that the jury in this case returned a verdict of almost $7 million on the strength of testimony that the trial judge excoriated as "preposterous" and "the most ill-supported weakest personal opinion I've ever heard." Pet. C.A. App. 226, 235.[7] The Tenth Circuit's decision to uphold that result on the basis of reasoning that is inconsistent with *Daubert* and irreconcilable with the analysis adopted by other circuits is amply deserving of this Court's review.

---

[7] Bihlmeyer's testimony is hardly an isolated example of unreliable engineering testimony. See C.W. Griffin, *Viewpoint: Ban Junk Science From The Courts*, 237 ENGINEERING-NEWS RECORD 89 (Oct. 21, 1996) ("As an expert [consulting engineer] in [construction] litigation, I have encountered opposing experts attempting to repeal Dalton's law of partial pressures, Newton's laws of motion and the second law of thermodynamics — the latter by an 'expert' who claimed that wet insulation had a negative thermal resistance, thus reversing the direction of natural heat flow!").

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

RICHARD C. HITE
SCOTT J. GUNDERSON
Kahrs, Nelson, Fanning
Hite & Kellogg
200 West Douglas
Wichita, KS 67202
(316) 265-7761

KENNETH S. GELLER
Counsel of Record
STEPHEN M. SHAPIRO
ALAN E. UNTEREINER
Mayer, Brown & Platt
2000 Pennsylvania Ave., N.W.
Washington, D.C. 20006
(202) 463-2000

JOSEPH J. KUTER
Senior Counsel
Subaru of America, Inc.
Subaru Plaza
2235 Route 70 West
Cherry Hill, NJ 08034
(609) 488-8572

NOVEMBER 1996